S. Hrg. 99-135

CONSERVATION SERVICE REFORM ACT OF 1985

HEARING

BEFORE THE

SUBCOMMITTEE ON
ENERGY REGULATION AND CONSERVATION

OF THE

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

ON

S. 410

A BILL TO REPEAL THE COMMERCIAL AND APARTMENT
CONSERVATION SERVICE, AND FOR OTHER PURPOSES

MAY 6, 1985

Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE
49-591 O WASHINGTON : 1985

5311-45

COMMITTEE ON ENERGY AND NATURAL RESOURCES

JAMES A. McCLURE, Idaho, *Chairman*

MARK O. HATFIELD, Oregon
LOWELL P. WEICKER, Jr., Connecticut
PETE V. DOMENICI, New Mexico
MALCOLM WALLOP, Wyoming
JOHN W. WARNER, Virginia
FRANK H. MURKOWSKI, Alaska
DON NICKLES, Oklahoma
CHIC HECHT, Nevada
DANIEL J. EVANS, Washington

J. BENNETT JOHNSTON, Louisiana
DALE BUMPERS, Arkansas
WENDELL H. FORD, Kentucky
HOWARD M. METZENBAUM, Ohio
JOHN MELCHER, Montana
BILL BRADLEY, New Jersey
JEFF BINGAMAN, New Mexico
JOHN D. ROCKEFELLER IV, West Virginia

FRANK M. CUSHING, *Staff Director*
GARY G. ELLSWORTH, *Chief Counsel*
D. MICHAEL HARVEY, *Chief Counsel for the Minority*

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

DON NICKLES, Oklahoma, *Chairman*

MARK O. HATFIELD, Oregon
PETE V. DOMENICI, New Mexico
JOHN W. WARNER, Virginia
CHIC HECHT, Nevada
DANIEL J. EVANS, Washington

HOWARD M. METZENBAUM, Ohio
WENDELL H. FORD, Kentucky
BILL BRADLEY, New Jersey
JEFF BINGAMAN, New Mexico
JOHN D. ROCKEFELLER IV, West Virginia

JAMES A. McCLURE and J. BENNETT JOHNSTON are Ex Officio Members of the Subcommittee
ALLEN STAYMAN, *Professional Staff Member*

CONTENTS

Page

S. 410 2

STATEMENTS

Davie, Maxie, vice president, corporate affairs, Texas-New Mexico Power Co., on behalf of the Edison Electric Institute 280

Evans, Hon. Daniel J., a U.S. Senator from the State of Washington 5

Farruggia, Sal, legislative chairman, National Association of Plumbing-Heating-Cooling Contractors, as presented by Chuck Lavin 259

Fitzpatrick, Hon. Donna R., Acting Assistant Secretary for Conservation and Renewable Energy, Department of Energy 5

Hall, Neal, vice president, community relations, Lone Star Gas Co., on behalf of the American Gas Association, accompanied by Jannette Moser 292

Hughes, Norman R., N.R. Hughes & Associates 120

Johnston, Hon. J. Bennett, a U.S. Senator from the State of Louisiana 4

McDonald, Norris, director, conservation and transportation project, Environmental Policy Institute, on behalf of the Energy Conservation Coalition 138

McLogan, Matthew E., commissioner, Michigan Public Service Commission 35

Nickles, Hon. Don, a U.S. Senator from the State of Oklahoma 1

Norton, Thomas, Government Affairs Council, American Supply Association ... 183

O'Connor, Patrick, Alliance for Fair Competition 160

Reckinger, Walter M., III, Sheet Metal and Air Conditioning Contractors' National Association, Inc 243

Spielvogel, Lawrence G., consulting engineer, on behalf of the American Consulting Engineers Council 106

Thomas, Dennis L., commissioner, Public Utility Commission of Texas 24

APPENDIXES

Appendix I

Responses to additional committee questions 319

Appendix II

Additional material submitted for the record 534

CONSERVATION SERVICE REFORM ACT OF 1985

MONDAY, MAY 6, 1985

U.S. Senate, Subcommittee on Energy Regulation and Conservation, Committee on Energy and Natural Resources,

Washington, DC.

The subcommittee met, pursuant to notice, at 9:35 a.m., in room SD-366, Dirksen Office Building, Hon. Don Nickles, presiding.

Present: Senators Nickles, Evans, Johnston, and Ford.

Also present: Allen Stayman, professional staff member; D. Michael Harvey, chief counsel for the minority; Benjamin S. Cooper, professional staff member for the minority; and James T. Bruce, counsel for the minority.

OPENING STATEMENT OF HON. DON NICKLES, A U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator Nickles. Good morning.

Today the Subcommittee on Energy Regulation and Conservation will conduct a hearing on Senator Johnston's bill, S. 410, a bill to repeal the Commercial and Apartment Conservation Service, CACS.

In 1980, Congress passed legislation initiating the development of the Commercial and Apartment Conservation Service. This year, the program is being phased in throughout the Nation. However, questions have been raised regarding the costs and also the benefits of CACS. The Department of Energy supports its repeal, calling the program "burdensome, overly restrictive, and often not cost-effective."

Last year, the House of Representatives passed legislation repealing the program. Although the Senate did not concur in the House legislation, it did vote to postpone implementation of the program for 1 year to allow for further consideration.

Today we will begin that consideration by hearing testimony on a bill to repeal the CACS Program. I am pleased to have the principal sponsor of this legislation, Senator Johnston, join us at this morning's hearing.

Senator Johnston, do you have any comments?

[The text of S. 410 follows:]

II

99TH CONGRESS
1ST SESSION

S. 410

To repeal the Commercial and Apartment Conservation Service, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 6 (legislative day, JANUARY 21), 1985

Mr. JOHNSTON (for himself, Mr. WARNER, Mr. MCCLURE, and Mr. MURKOWSKI) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To repeal the Commercial and Apartment Conservation Service, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Conservation Service Reform Act of 1985".

SEC. 2. (a) IN GENERAL.—Title VII of the National Energy Conservation Policy Act (relating to energy conservation for commercial buildings and multifamily dwellings) is hereby repealed.

(b) CLERICAL AMENDMENT.—The table of contents for such Act is amended by striking out the items relating to title VII.

STATEMENT OF HON. J. BENNETT JOHNSTON, A U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator JOHNSTON. Yes, thank you, Mr. Chairman. I want to congratulate you on holding these hearings on S. 410, which is my bill to repeal the Commercial and Apartment Conservation Service or CACS. I am pleased that Senators Warner, McClure, Murkowski, and Trible are cosponsors of the bill.

It's a very simple bill. It repeals legislation enacted in 1980 to require electric and gas utilities to offer energy audit services for commercial buildings and apartments.

My bill does not affect the Residential Conservation Service statute. The RCS was enacted in 1978 to require utilities to offer energy conservation services for individuals residents. I introduced this legislation to provide the committee with a vehicle for a review of utility energy conservation issues. Last year we were unable, for lack of time, to respond to a House bill that made a number of decisions about RCS and CACS. We promised to take up these matters early in 1985.

The main issue we must decide is whether and to what extent we believe we have to force electric utilities to offer energy conservation services to their customers. At the present time, the CACS Program has been implemented only in Michigan; however, DOE has approved CACS plans for 12 other States and for 22 nonregulated utilities. Within a year of approval, these other States and utilities must establish programs, invest the startup costs, and begin to offer the CACS services. CACS is not in effect in the world outside of Michigan, but its effectiveness is imminent in a lot of places.

RCS, on the other hand, was implemented in almost every State by 1980 and has become a standard component of utility operations and public relations. However, the legal basis for RCS activities is being challenged. DOE maintains that because utilities are not required to inform their customers of the availability of RCS services after January 1, 1985, they are free to terminate their programs. The RCS statute is totally silent on the termination of the program as a whole.

Are utilities required to offer RCS services or not? Does the $15 per audit limit of the RCS statute apply or doesn't it? Do other provisions of RCS that authorize utility information, supply and installation activities continue in effect, or have they lapsed? What are DOE's obligations, if any, under the statute that is now on the books?

It may be that everyone is happy not asking these questions. DOE does not believe that there are any mandatory features of the RCS statute to enforce. Utilities appear willing to continue to promote energy conservation on their own. Energy conservation saves money, helps postpone tough decisions about constructing new generating capacity, and is good for the public image. Maybe we should just leave RCS alone.

That is what my bill does. On the other hand, S. 410 repeals CACS. It is my sense that we do not need a complicated Federal regulatory program to ensure that energy audits are provided to commercial and apartment buildings. Money can be made in saving energy in these buildings.

Companies have been formed and are being formed to exploit this opportunity to make money. We may want to permit utilities to participate in these activites, but we shouldn't think that nothing will happen unless we force the utilities into the business.

The chairman's staff has assembled a list of expert witnesses to comment on these issues. I hope they will also comment on the matters that I have discussed in this statement, to wit: To what extent is the CACS needed to ensure that progress is made in energy conservation in commercial buildings and apartments? And, to what extent are utility efforts to help their residential customers with energy conservation likely to continue under the current RCS statute?

Thank you, Mr. Chairman.

Senator **Nickles**. Thank you, Senator Johnston. Again, we appreciate your effort and also your introduction of the bill.

We are also pleased to have Senator Evans with us today. He has shown a lot of leadership in conservation issues. Senator Evans, do you have any opening comments?

STATEMENT OF HON. DANIEL J. EVANS, A U.S. SENATOR FROM THE STATE OF WASHINGTON

Senator **Evans**. Thank you, Mr. Chairman, just a very short one. I am very interested in listening to the testimony of the witnesses and based on that testimony to make up my mind as to the proper direction this particular issue should take. But I warn everybody that I think we've got a long way to go in energy conservation, that much of it is the very cheapest way we can gain the equivalent of new sources of energy, and, frankly, I'd be a heck of a lot more comfortable if we spent $6 billion on energy conservation than spending it on the synfuels industry.

Senator **Nickles**. Thank you, Senator Evans.

Our first guest today is Donna Fitzpatrick, Acting Assistant Secretary for Conservation and Renewable Energy from the U.S. Department of Energy. I'm going to ask all of our panelists if they would be kind enough to summarize their statements. We have a lot of panelists today and if you could abbreviate your comments it would certainly be appreciated by this Senator.

Miss Fitzpatrick.

STATEMENT OF HON. DONNA R. FITZPATRICK, ACTING ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

Ms. **Fitzpatrick**. Thank you, Mr. Chairman. We have a full statement in the record and I will summarize it now.

Senator **Nickles**. Thank you.

Ms. **Fitzpatrick**. Mr. Chairman, Senators, I appreciate the opportunity to appear before you today to discuss the Commercial and Apartment Conservation Service Program, which is also known as CACS, and S. 410, a bill to repeal that program.

The CACS Program requires that large gas and electric utilities perform, upon request, energy audits for eligible small commercial buildings and centrally heated or cooled apartment buildings consisting of five or more apartments.

To date, the Department of Energy has received CACS implementation plans from 36 States and 30 nonregulated utilities. We have approved 13 State plans and 22 utility plans. There are more State plans in final approval stage, and the rest have been returned to the States with recommendations for how they can be brought into compliance with the requirements. Ten States have indicated that they do not intend to participate in the CACS Program. We expect to publish a final rule for the Federal stand-by plan to cover utilities in those States by September of this year.

While we are carrying out our responsibilities under the law with regard to CACS, we do not believe that the program is likely to result in the sort of energy savings that were envisioned by Congress when the program was created 5 years ago.

Based upon what we consider to be rather generous assumptions, we estimate that CACS is likely to result in a first-year energy savings of three one-thousandths of a quad, or less than two one-hundredths of 1 percent of the Nation's total residential and commercial energy use. I might add that these three one-thousandths of a quad would be worth perhaps $30 million to the retail customer.

Additionally, the energy picture has changed significantly since the crisis days of 1979 and 1980 when this program was conceived. Not only has the efficiency with which we use energy as a nation, as measured by energy consumed per dollar of GNP, improved markedly, today there are many, many small businesses as well as the utilities and community service organizations offering audit services to those customers who are covered by CACS.

The customers covered by CACS actually represent only about 8 percent of the energy consumption of all residential and commercial users, so it is a rather small target to begin with.

As some examples, 109 utilities recently responded to a survey conducted by the Edison Electric Institute. Forty-six percent indicated that they already have programs other than CACS for their commercial and apartment customers, and they think that these programs are more effective than CACS will be.

The Department of Energy conducted a regulatory impact analysis which estimates the costs of the program to the Federal and State governments, utilities and customers. This will be in excess of $30 million per year. In other words, it will cost more than the energy that will be saved would have cost. This includes the net cost to the customers of making energy improvements, which is estimated at $4 million per year.

Therefore, the overall costs of the program will exceed the cost of the energy to be saved. It will also be something like eight times the cost of actual energy improvements to customer properties. This is what we mean by "burdensome, restrictive and not cost-effective."

Given these factors, the administration believes that CACS should be repealed and, therefore, we continue to support its repeal and S. 410. We will, of course, continue to encourage States and utilities to implement voluntary residential and commercial energy conservation programs which are best suited to their needs. We do not think that repeal of the Federal program should prevent States from exercising their own legislative and regulatory authority if they wish to and if it's deemed beneficial in their own areas.

Mr. Chairman, we appreciate the advice we have received from the Congress and this subcommittee in particular, and we thank you for the opportunity to appear here today.

[The prepared statement of Ms. Fitzpatrick follows:]

Statement of Donna R. Fitzpatrick
Acting Assistant Secretary
for Conservation and Renewable Energy
U.S. Department of Energy
Before the
Committee on Energy and Natural Resources
Subcommittee on Energy Regulation and Conservation

Mr. Chairman and Members of the Subcommittee, I appreciate this opportunity to appear before you today on the Commercial and Apartment Conservation Service program and S. 410, a bill to repeal that program. Although many of the Subcommittee members are familiar with this program, I would like to present a very brief background before describing its current status and informing you of DOE's position regarding its future.

Background

The Commercial and Apartment Conservation Service (CACS) program is being administered by the Department of Energy (DOE) with the objective of encouraging the installation of energy conservation and renewable energy resource measures in apartment and small commercial buildings. The intent of the program is to reduce the growth in demand for energy in the United States and to conserve non-renewable energy sources.

The CACS program is mandated by Title VII of NECPA. Title VII was added by the Energy Security Act of 1980. The legislation requires large gas and electric utilities to perform, upon request, energy audits of eligible small commercial buildings and of large (five or more apartments) centrally heated or cooled apartment buildings. As is the case with the Residential Conservation Service (RCS) program, each State may submit a State Plan to DOE for managing the CACS program in the State. All covered nonregulated utilities, which are not included in a State Plan, must submit plans directly to DOE for their CACS programs. All States and nonregulated utilities have up to one year to implement their programs after their plans have been approved. If a State CACS Plan is not submitted, does not meet the CACS regulations, or is determined to be inadequately implemented, DOE is required to invoke its CACS Federal Standby authority in order to manage the affected utility programs directly.

Current Status

The CACS program is currently being implemented as required by law. CACS plans have been received from 36 States and 30 nonregulated utilities. Thirteen State plans (Arkansas, California, Indiana, Kentucky, Michigan, Montana, New Mexico, North Carolina, North Dakota, Rhode Island, South Dakota, Vermont, and Wisconsin) and 22 nonregulated utility plans have been approved. Another two State plans are in the final approval stage. Ten States have indicated that they do not intend to participate in the CACS program. The remaining States are in various stages of negotiation with DOE concerning their proposed CACS plans. The CACS Federal Standby Plan NOPR was published in the Federal Register on December 31, 1984. We expect to publish the Final Rule by September 1985.

Future of CACS

As you may know, in January of last year DOE submitted to the Congress a report entitled "Residential Conservation Service Evaluation Report". This report presented the results of an assessment, conducted by DOE during 1983, of the performance of the RCS program. The purpose of this evaluation was to assess the effectiveness of the RCS program in encouraging the installation of energy conservation measures in existing homes. According to this evaluation, the three most significant shortcomings of the RCS program are: 1) The energy savings from the RCS program have been lower than initially anticipated; 2) The RCS program has not been self-supporting, because the $15 limit on the audit fee that can be charged directly to customers covers only a small part of the average audit costs exceeding $100; and 3) The primary audit users of RCS have been mostly middle and upper income customers, who have thereby received a subsidy, in part, from lower income customers.

Because of the similarities between the RCS and CACS programs, many of the basic problems identified in the January 1984, DOE analysis of the RCS program are expected to occur in the CACS program. In addition, CACS reaches only the smallest commercial buildings and its eligibility requirement of 4000 kWh of electricity or 100 MBtu maximum monthly energy use excludes most energy-intensive commercial uses (e.g., restaurants, shopping centers, food stores, etc.). Given our position that the RCS program be discontinued, the CACS program, a supplemental program that reaches fewer customers and has lower potential savings, should not be maintained.

The Administration has supported repeal of the CACS program in the past because the program was expected to be burdensome, overly restrictive, and often not cost-effective. The Administration continues to support its repeal, and therefore endorses S. 410. However, DOE will continue to encourage States and utilities to implement voluntary residential and commercial energy conservation programs which meet their needs.

Senator NICKLES. Thank you very much, Ms. Fitzpatrick. A couple of questions.

You mentioned 13 States have had their plans approved?

Ms. FITZPATRICK. Yes; that's correct.

Senator NICKLES. Are they in the process of implementing those plans right now?

Ms. FITZPATRICK. Only one. As Senator Johnston mentioned, Michigan is beginning to implement its program. Michigan's plan was approved last July, 10 months ago. The States have 12 months to implement a program after their plan is approved. The rest of the States did not begin to get plan approvals until November-December and on through the spring. So there still is probably 6 months before the rest of the States with approved plans have to begin to implement.

So, no other States have implemented yet besides Michigan. We understand informally from about half of the States that already have approved plans that they are not hurrying to implement; they want to see what Congress will do. They may not have to implement.

Senator NICKLES. Thirty-six States have submitted plans for approval?

Ms. FITZPATRICK. Yes, Mr. Chairman.

Senator NICKLES. So you've approved basically one-third of those plans?

Ms. FITZPATRICK. That's correct.

Senator NICKLES. But you're saying most of the States are waiting to see if Congress will enact or repeal this requirement, and then you feel if Congress did repeal it, then most of them would not go forward with implementation?

Ms. FITZPATRICK. Well, we're not sure we can say most would not implement some kind of a plan. It seems they are waiting to see whether they will have to implement the Federal plan.

Senator NICKLES. What type of penalty is imposed on them, or does the law mandate that States come up with a plan by such-and-such a date or they'll receive a Federal standby plan?

Ms. FITZPATRICK. I'm not sure what the statute provides. I suppose there would be something at the minimum if the Federal Government chose to pursue a court order of some kind forcing the State to implement. We can get you for the record what penalties there might be in the statute.

Senator NICKLES. Staff informs me that the civil penalties could reach up to $25,000 a day.

Ms. FITZPATRICK. Well, that's pretty impressive.

Senator NICKLES. Ten States have indicated that they do not plan to participate?

Ms. FITZPATRICK. They will not be submitting their own plans for approval. That means that they would come under the Federal standby plan.

Senator NICKLES. And the Federal standby plan, have there been regulations issued on it?

Ms. FITZPATRICK. We have issued the proposed regulations. We expect to have the final rule issued in September of this year. So we would be moving at a reasonable time after that to notify the

States and utilities covered by the Federal standby plan of what they will have to do.

Senator NICKLES. You also mentioned something that is not too surprising to this Senator. You mentioned that the cost of this program and the cost to implement this program is what, in relationship to the benefits?

Ms. FITZPATRICK. Well, it looks as if the program will probably cost as much, if not more than, the cost of the energy saved.

Senator NICKLES. And that cost is how much again?

Ms. FITZPATRICK. It's going to cost something over $30 million a year to implement the program. That's cost to Government, utilities and net customer expenditures due to the audit. And we think a very generous estimate of how much energy will be saved will be three one-thousandths of a quad, which costs about $30 million.

Senator NICKLES. You mentioned $30 million in cost, and that's somewhat split between Government and utilities. Do you have a breakdown between Government and utilities?

Ms. FITZPATRICK. We do estimate that it will cost about $22 million to the utilities, perhaps $4 million in customer expenditures on conservation measures, another $4 million in State costs, and about $1 million in Federal costs. This assumes that there will be a three percent penetration rate.

Senator NICKLES. What do you mean by 3 percent——

Ms. FITZPATRICK. Three percent of the eligible customers will actually request an audit and then take conservation measures suggested by the audit. We think also that 3 percent is probably a rather generous assumption. To date, about $3 million has been spent on startup costs, so that means there is about $28 million in costs that could be avoided if the program is repealed fairly soon.

Senator NICKLES. So you've stated your strong support behind the legislation that we're considering today, Senate bill 410?

Ms. FITZPATRICK. That's correct, Mr. Chairman.

Senator NICKLES. Do you also favor repeal for the residential requirements?

Ms. FITZPATRICK. The Department of Energy has issued its legal opinion, that States are no longer required—excuse me, the utilities are no longer required by statute to offer energy audits. The legal opinion is that the utilities therefore may, within a reasonable time, terminate their RCS programs, at least as far as the Federal requirements are concerned.

Senator NICKLES. Do you think we should incorporate legislation that would repeal it and so maybe take some of the gray area? Should this legislation go a little further than this?

Ms. FITZPATRICK. That's a matter of legislative strategy, and I wouldn't presume to tell the committee how to go about that. It might be better to take the approach of separating the two issues. Last year they were handled together and it seemed to be difficult to arrive at a resolution on both of them at the same time.

Senator NICKLES. Thank you very much.

Senator Johnston, do you have any comments?

Senator JOHNSTON. Yes, thank you, Mr. Chairman.

Miss Fitzpatrick, what did you say was the total startup cost of the program and how much of that has been incurred?

Ms. FITZPATRICK. We estimate that it will be in excess of $30 million per year total cost—utilities and Government and customer actions. About $3 million of that has been spent to date, so there's about $28 million or more that could be avoided if the bill is passed in a timely manner.

Senator JOHNSTON. OK. Under the proposed rules, to what extent will utility customers subsidize the recipient of the audits?

Ms. FITZPATRICK. For apartments, the utility is given limits on how much it can charge for the audit that will be provided to the customer. Our experience under the RCS Program indicates that the utility probably will not be able to recover from the served customer the cost of the audit; therefore——

Senator JOHNSTON. The cost of the audit would be about what, on the average?

Ms. FITZPATRICK. Probably several hundred dollars. It's been running from $120 to $300 for a residential, single family residential audit. These will be larger buildings in general; therefore, it would cost, we would expect, three, four, perhaps $500. It's difficult to say at this point.

Senator JOHNSTON. And what's the limit on the cost that they can recover?

Ms. FITZPATRICK. It depends on the number of units in the apartment building. The cost per unit, $15 per unit in an apartment building can be charged, so that may or may not cover the cost of providing the audit. Of course, anything that isn't covered by the customer himself who is receiving the audit would be most likely added to the utility's rate base and it would have to be subsidized by all its other customers.

Now given the fact that we expect to have a very low response rate, say in the range of 2, 3, 4, 5 percent, that means that something over 90 percent of the customers in the utility's rate base will be actually subsidizing the service provided to the few who ask for an audit.

Senator JOHNSTON. And, of course, those who would be subsidized are the owners of large apartments and commercial buildings.

Ms. FITZPATRICK. For the most part.

Senator JOHNSTON. This is really sort of welfare for the rich.

Ms. FITZPATRICK. It's even worse than that, Senator, because in excess of 90 percent of the small building owners who are eligible for the audit will not ask for it. They will provide a subsidy, of course to those businesses that receive the audit. Everybody else in the entire rate base of the utility will also be subsidizing the cost of the audit.

Senator JOHNSTON. Have you undertaken any quantitative studies on the cost-effectiveness and energy conservation potential of the program?

Ms. FITZPATRICK. We have made some rough studies. Of course, these things of predicting human behavior always have to be accompanied by caveats. At any rate, extrapolating from some of our experiences with RCS—the comparable program for the residential sector—we estimate that at a 5-percent penetration rate—5 percent of eligible customers taking advantage of the program and doing something with their properties in response to it—and an average 5-percent reduction in energy use by those customers, we would see a total amount of energy saved in the range of three one-thousandths of a quad.

This is about two one-hundredths of 1 percent of the energy that is actually used in the residential and commercial sector.

Senator JOHNSTON. And this is an extrapolation from the RCS?

Ms. FITZPATRICK. The extrapolation part is the assumptions about how many people would actually respond to the offer of an audit.

Senator JOHNSTON. Well, how did you figure what the energy savings would be per unit?

Ms. FITZPATRICK. We know how much energy is used by the target audience. Roughly, they use about one quad—in end-use terms—a year in the target audience, one quad out of the 73, 74 that are used in the country—also in end-use terms. So assuming they would get what is a rather typical energy savings of about 5 percent, we worked out the arithmetic.

Senator JOHNSTON. Where do you get the typical 5 percent?

Ms. FITZPATRICK. This is also some of our experience with RCS, the kinds of benefits that were achieved by doing the things that the RCS program recommended be done.

Senator JOHNSTON. Do you have any quantitative study on the effectiveness of the RCS Program?

Ms. FITZPATRICK. Yes, we do. We have a study that was completed late in 1983 and, I believe, released in January of last year, and we also have some follow-up studies and will be happy to provide those for the record.

I might add that the penetration rate that we found in the RCS program was less than 2 percent, about 1.7 percent. That is why I said that our 5-percent penetration rate, we think, is really being very generous. We would have to get substantially more response than we experienced in the past to achieve a 5-percent rate.

[Subsequent to the hearing the Department of Energy supplied the following:]

We are providing the Subcommittee with copies of the Residential Conservation Service Evaluation report, as well as three reports which were prepared as follow-up to it.[1]

---

[1] Due to the voluminous nature of the materials supplied, the reports have been retained in subcommittee files.

January 1984

U.S. Department of Energy

DOE/CE-0086

Assistant Secretary, Conservation and
Renewable Energy
Deputy Assistant Secretary for Conservation
Division of Building Services
Washington, DC 20585

RESIDENTIAL CONSERVATION SERVICE

EVALUATION REPORT

tes United States United Stat
Energy Department of Energy
s United States United States
artment of Energy Departme
nited States United States U
Department of Energy Depar
States **United States** United
nergy **Department of Energy**

ORNL/CON-146

Contract No. W-7405-eng-26

ENERGY DIVISION

ENERGY SAVINGS DUE TO THE BPA RESIDENTIAL WEATHERIZATION PILOT PROGRAM TWO YEARS AFTER PARTICIPATION

Eric Hirst
Dennis White
Richard Goeltz

Date Published: January 1984

Research sponsored by the Office of Conservation, Bonneville Power Administration, U.S. Department of Energy, under contract W-7405-eng-26 with Union Carbide Corporation.

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
operated by
UNION CARBIDE CORPORATION
for the
DEPARTMENT OF ENERGY

ORNL/CON-168

Contract No. DE-AC05-84OR21400

ENERGY DIVISION

ENERGY SAVINGS ONE AND TWO YEARS AFTER PARTICIPATION IN MINNESOTA HOME ENERGY AUDIT AND RETROFIT LOAN PROGRAMS

Eric Hirst
Richard Goeltz

Oak Ridge National Laboratory
Oak Ridge, Tennessee 37831

Date Published: January 1985

Research sponsored by the Office of Conservation and
Renewable Energy, U.S. Department of Energy, under
contract DE-AC05-84OR21400 with
Martin Marietta Energy Systems, Inc.

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37831
operated by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U.S. DEPARTMENT OF ENERGY

ORNL/CON-166

Contract No. DE-AC05-84OR21400

ENERGY DIVISION

THREE YEARS AFTER PARTICIPATION: ELECTRICITY SAVINGS DUE TO THE BPA RESIDENTIAL WEATHERIZATION PILOT PROGRAM

Eric Hirst
Dennis White
Richard Goeltz

Date Published: January 1985

Research sponsored by the Office of Conservation,
Bonneville Power Administration, U.S. Department of Energy,
under contract DE-AC05-84OR21400 with the
Martin Marietta Energy Systems, Inc.

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37831
operated by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U.S. DEPARTMENT OF ENERGY

Senator **Johnston**. How did you determine the 5-percent rate? Did you do before and after assessments of energy use in the single family residences that were covered by RCS?

Ms. **Fitzpatrick**. Yes. We were able to get some data on that. In RCS we found, on the average, that the reduction was about 4 percent. So to be fair on all sides we've been a little bit more generous in our assumptions of how effective CACS might be. So I think it comes out that it is not a very effective program.

Senator **Johnston**. Thank you, Mr. Chairman.

Senator **Nickles**. Thank you, Senator Johnston. I appreciate your interest.

I have to testify before the Commerce Committee right now on cargo preference. Senator Evans has been kind enough to say that he would Chair the meeting until 11 and I will return at that time.

Senator Evans, do you have some comments? Thank you, too, for your assistance.

Senator **Evans** [presiding]. Thank you, Mr. Chairman.

I guess I start out ambivalent, ambivalent because on the one hand I'm struck by the expectations of the Department of Energy at the low levels of participation, the low levels of penetration and the low levels of saving, which don't jibe at all with the experience we've had in the Northwest.

Are we that unusual? Are the studies that you've done so far incomplete or what would you judge is the difference?

Ms. **Fitzpatrick**. I think that there certainly are regional differences around the country, Senator, and perhaps the Northwest is unusual. There certainly has been a great deal of attention paid in that area to conservation programs, both by the utilities and by various forms of public authorities.

We are basing our studies, our estimates, on nationally-based information.

Senator **Evans**. I know, for instance, in Seattle City Light on the residential side now they've already covered 32,000 out of 140,000 homes. That's pretty close to a quarter. The program was initiated just 6 years ago and, of course, has just been gathering steam in the intervening period.

In the intervening period, the Puget Sound Power & Light, which represents much of the suburban area around Seattle and a number of other areas within the State of Washington, has had some 71,000 home energy checkups and are just beginning or they're kind of waiting to see what will happen on the commercial/industrial side.

So I think that penetration rates with appropriate kinds of incentive can be a whole lot higher than anything that's been estimated here. Wouldn't it be worthwhile for the Department to take a look at some areas of the country where the records have been unusually good and see what happens there that might be useful to spread around to the rest of the country?

Ms. **Fitzpatrick**. I think you're correct, Senator, that it is possible to get higher penetration rates than have resulted from some of the Federal measures. In fact, the information that we have, and I know information that will be presented later by the Edison Electric Institute, indicates that many utilities typically are offering programs to residential, commercial, and apartment customers which have significantly higher penetration rates.

I think the fact that it is already happening voluntarily, because utilities and their customers realize that it's in their best interest to pursue increased efficiency, indicates that the incremental effect of CACS will probably be very small. That is, things are happening already. The additional assistance that will be provided by a Federal regulatory program is probably in the range that we are estimating.

Senator EVANS. That's why I said at the beginning I was ambivalent, because while I said the Seattle City Light Program is unusually good in its penetration, I think it's well accepted generally in the city, their comments also are that the Feds are mucking around too much in the program, which ought to be run at the local level.

Ms. FITZPATRICK. That's probably true, Senator. I have just been handed a note that says that the Seattle City Light was a local program. It was not part of RCS.

Senator EVANS. Well, that's right. So we can get successes. They claim that the reporting requirements are too onerous, that DOE wants to know exactly what method of calculation it uses for energy savings, and they ask the question why if they get the results, you know, what difference does it make.

Ms. FITZPATRICK. It's because people like me have to sit in front of congressional committees and explain our numbers and, therefore, we have to be told where they came from.

Senator EVANS. Well, a little matter of trust between local and the Federal Government wouldn't be a bad idea.

As an alternative, then—well, let me proceed on one other line of questioning. You mentioned that energy audits represent a subsidy of one set of ratepayers to another.

Would it be appropriate to look at it in a different way, and that is that if you instead look at each residence, each commercial/industrial establishment as an energy generating station and out of that you're going to get additional energy to serve the needs of a growing utility, and if you can get that energy cheaper than you can by building a central plant or in some other fashion, even if there is some shift, those ratepayers that you suggest would be subsidizing the others would still be paying less than if the energy were not conserved and all of the ratepayers had to go out and pay for a central operating plant?

Isn't that appropriate?

Ms. FITZPATRICK. Senator, I think you make a good point: That the benefits of conserving energy are not simply the monetary benefits that go to the customer who had to pay for this energy. There is a common good benefit that goes to reducing the total demand for that utility system.

Our problem is that CACS does not seem to us to be a very effective way of achieving that particular goal. It seems to be much more effective if a local utility can address the particular needs of its customers—the way that they use energy, its own capacity in relation to its demand, the source of its power, and other factors that go into achieving the general reduction of demand in its own area.

Senator **Evans**. I think that may well be true. Let me go back, however, to the general rather than get to the specific of who should do it or how it best gets done. As long as energy saved is cheaper than the marginal cost of new generating plants, it's therefore in the best interests of all the ratepayers of a particular utility. Wouldn't that be a reasonably accurate statement?

Ms. **Fitzpatrick**. Yes, that's true, Senator.

Senator **Evans**. I guess then it comes down to the question: if not this, what? Should the Federal Government have any role to play, in your view, in either residential or commercial establishments? If this has not been an effective program, is there anything that would be effective?

Ms. **Fitzpatrick**. We are trying to provide information and encouragement to utilities and States to help make them aware of effective programs that might be helpful to them. So we think that our working as a kind of clearinghouse for utilities can be very helpful.

As a matter of fact, we're having our second annual workshop later this month to which utilities and State officials come to learn what is going on in different areas of the country. We have some other programs that we carry out which we think are more helpful than a regulatory program of the CACS variety and we think that we would like to increase our efforts in these areas.

We have a request in the fiscal year 1986 budget which will help us to work with utilities to determine what are the best, most effective means that they can use both to increase their own efficiency and to increase their customers' efficiency, both by being more efficient in their operations and also by load-leveling, peak-shaving efforts, and a lot of this is going on around the country.

We're seeing some very effective programs and we think that the more utilities become informed on what can be done, the more they will see it is in their best interest and the customers' best interest that they become active.

Senator **Evans**. I suspect many utilities in the country are kind of caught on the horns of a dilemma. They see a growing demand for electricty, for fuels, but particularly electricity, the high cost and the uncertainty of new central plants and the difficulty and sort of scattered nature of conservation programs.

Do you believe that there may be some inclination of a utility in looking at a central plant to produce so much electricity versus a comprehensive energy conservation program to produce the equivalent to opt for the central plant because it appears to be simpler, more straightforward, and even if it costs some additional they'll not only get it back in the rate base but they'll have a bigger rate base on which to apply their rate of return?

Is that, do you suppose, in the backs of the minds of some utility planners?

Ms. **Fitzpatrick**. I think it's true that a utility which is allowed to achieve a given rate of return on its capital investment has an incentive to increase its capital base so as to increase the profits per share. If it's an investor-owned utility. However, the circumstances being as they are, I don't think that any utility can consider that it's a fairly easy matter to build new generating capacity.

In fact, we're seeing very little new generating capacity being ordered. That's been true for the last several years, either of nuclear or conventional fossil plants, or large hydropower. Therefore, I think that utilities are coming more and more to realize that, not only the cheapest, but the easiest way of, in effect, adding capacity is to encourage increased efficiency.

Senator EVANS. In fact, it seems to me that there's sort of a ticking time bomb out there with just the facts you bring forth. The reluctance of utilities to embark on new and rather uncertain central generating plants, continued, even if it's slow, growth in the demand for electricity eventually will lead us to a pinch unless we find some reasonable alternatives.

This gets a little off the particular subject of the bill in front of us, but would it make sense for a utilities commission at the State level to allow a differential rate of return, one on the basis of new plant, one on the basis of conservation?

Ms. FITZPATRICK. That's certainly an intriguing idea. I think that especially depending on the capacity and demand ratio in each area for each utility that could be a very inviting prospect, something that a local utility commission would want to consider.

Senator EVANS. Would you say in general that that—I guess you would call that a market incentive, not the true marketplace, but that much of what needs to be done in the conservation field, especially in commercial and in the industrial area, is more likely to be market driven than through an audit or mandatory program?

Ms. FITZPATRICK. I think that's certainly true, and there's a growing industry of engineers and energy service companies that are seeing this as a market and getting more and more experience at effectively marketing energy conservation measures.

Senator EVANS. Thank you.

Senator Ford.

Senator FORD. Thank you, Senator Evans.

Miss Fitzpatrick, it seems like that those who ask the last questions, all their questions have been asked.

Did I understand you to say earlier in your testimony that you wanted nothing done in legislation to prevent States from continuing to provide this program? Did I understand that right?

Ms. FITZPATRICK. We don't understand that the repeal of the CACS Program, as proposed by S. 410, would prevent any State from initiating its own program under its own legislative or regulatory authority.

Senator FORD. You said that $3 million had already been spent and there is $28 million remaining.

Ms. FITZPATRICK. That would be our guess, yes.

Senator FORD. So there's $28 billion to be spent between now and September—or million. I've been thinking about the budget. [Laughter.]

Senator EVANS. If it were, we could get a good deficit reduction from the program.

Senator FORD. The $28 million saving, is that to be spent between now and September 30?

Ms. FITZPATRICK. No; that would be spent between now and the implementation by each State of their program, which will be sometime in the next 12 to 18 months.

Senator FORD. So this is carryover funding?

Ms. FITZPATRICK. That would be total startup costs for each State and utility as it began the program.

Senator FORD. Isn't the utility section now under litigation, or the utilities qualifying under this legislation are?

Ms. FITZPATRICK. I'm not aware of any litigation over the CACS Program, Senator.

Senator FORD. OK. I thought there was, but I stand corrected by a very efficient and articulate lady.

One thing has been bothering me some, and it came out in the news the last 2 or 3 days, that the so-called junk bond business—and I wish the distinguished Senator from Oklahoma was still here. Maybe he'll be back in time to help me a little bit—Phillips Petroleum will never be the same company. They've gone billions of dollars in debt and curtailed their operations, cut back on exploration, and research, and all those things that should be put into place now to help us in the outyears.

This story articulated my feelings very strongly that we may find an energy shortage rather than the so-called energy glut in the nineties, and early nineties at that, because of all the mergers, and potential takeovers, and expenditure of funds. There it is right there—"Does Another Oil Shock Lie Ahead?" It was in the Washington Post on May 5.

Did you happen to read that?

Ms. FITZPATRICK. No, Senator, I didn't read that particular article.

Senator FORD. Are you inclined to tilt toward that thinking or away from it?

Ms. FITZPATRICK. I have seen a number of figures, and the Department of Energy has put out some figures that certainly indicate that, as Senator Evans was mentioning, we may be headed for a crunch on the electric supply in the mid-1990's. I have seen a variety of predictions on when our natural gas bubble is going to burst, and those are anywhere from 5 to 15 years.

There are predictions about how quickly we are going through our known reserves of petroleum, especially domestic petroleum. I don't think there's any question that we have to assume that at some point, sooner or later, our fossil fuels are going to run out or become increasingly expensive.

That's why I'm doing the job I'm doing, because I think that we have to both use energy more efficiently and we have to find sources that are renewable, or at least abundant, that we can shift our reliance to. I try to stay out of the prediction business about either supplies or prices; I have enough other problems

Senator FORD. But your attitude toward that possibility somehow drives you to do what you're doing?

Ms. FITZPATRICK. That's correct. The simple fact that we're so heavily reliant on fuels that we know are in finite supply simply means that at some point, and the question is only when, not whether, we will need to shift our reliance to fuels that we are not now using or to renewable resources.

Senator FORD. You said in your statement that the administration has supported repeal of CACS Program in the past because the program was, and I quote, "expected to be burdensome, overly restrictive, and often not cost-effective."

In the administration's view, is CACS fixable through amendments or is your position simply one of ideological opposition to any form of such program?

Ms. **Fitzpatrick**. I think, Senator, that given the already very active and increasing activity by the utilities in pursuing energy efficiency for their customers and providing them with services which include free audits, and low interest, and no interest loans, for example, that any Federal regulatory program is becoming increasingly superfluous and hard to justify on the basis of its costs.

Senator **Ford**. Were the utilities doing that before we began to think about legislation and implementing some of it?

Ms. **Fitzpatrick**. This legislation was passed in 1980, so it was immediately after the 1979 oil price shock. I think utilities began to think about it at about the same time, and have become increasingly more attentive to it as the years have gone by.

Senator **Ford**. Well, if the administration's so opposed to it, why haven't they submitted legislation to repeal the law?

Ms. **Fitzpatrick**. Why haven't they? Well, because people in Congress have been—those bills have come up and we have endorsed them as they have come up.

Senator **Ford**. Thank you, Mr. Chairman.

Senator **Evans**. Thank you, Senator. Any other questions?

Miss Fitzpatrick, thank you very much.

Ms. **Fitzpatrick**. Thank you, Senator.

Senator **Evans**. The next panel is the Honorable Dennis Thomas, commissioner of the Texas Public Utility Commission, and the Honorable Matthew McLogan, commissioner, Michigan Public Service Commission, if you gentlemen will come forward.

We will have an opportunity for all members of the committee to submit questions in writing for the record to Secretary Fitzpatrick as well as the other witnesses.

Mr. Thomas, proceed.

STATEMENT OF DENNIS L. THOMAS, COMMISSIONER, PUBLIC UTILITY COMMISSION OF TEXAS

Mr. **Thomas**. Thank you, Senator Evans, Senator Johnston, Senator Ford. My name is Dennis Thomas. I appear in support of S. 410 to repeal the CACS Program. I am one of three public utility commissioners in Texas. The PUC in Texas administers both the RCS and the CACS Program by designation of the Governor.

By coincidence, I have been active in the energy conservation area for a number of years, in previous careers sold energy conservation services, largely to utility companies. Also by coincidence, my wife owns and operates a CACS-qualified business and would have been one of those small businesses who would be eligible for an audit. Given all that, I still support repeal of the program.

I think I can brief our approach pretty quickly here. In the opinion of the Texas PUC, the CACS Program is a vestige of an old approach and old ideas on how to achieve energy conservation, and it's based upon a set of needs and relationships that really don't exist any more.

The current needs driving our efforts in the State of Texas are to make the utility systems run as efficiently as possible, to avoid new capacity, and to avoid the higher costs of marginal fuels—in other words, load shaping and load shaving. The second need is to get help and information to consumers who need it, who want it, and who will take advantage of it. The CACS Program does not fit either one of those needs particularly well, and in fact we believe will get in the way of programs that can do a better job.

The relationships upon which the CACS Program were based or premised really don't exist the same any more. The leadership role that the Federal Government was taking in view of the national crisis situation really is not the same. The Federal commitment and the Federal resources that are being put into the programs are not the same and really much of the responsibility has shifted to the State level, and in fact the relationship between State regulators and utility suppliers is not the same.

For example, in Texas, we are much more deeply involved in the business of the utility companies with programs such as statewide load planning. Bottom line, like I said, is that CACS just really does not fit the needs or relationships which exist in Texas and we don't believe will produce the results which are required.

I think, shifting to previous experience, those of us that have spent a lot of time working in energy conservation believe that uniformity is important, but it ought to be uniformity of results instead of uniformity of designing the programs and mandating a specific approach. Our goals in Texas are to see that the utility systems run efficiently; in fact, we generally have replaced the term "energy conservation" with the term "energy efficiency." Now that's a subtle difference, but it's important.

We tend to evaluate the programs based upon their ability to provide capacity to the consumer, energy capacity at the cheapest possible price. We are looking to levelize loads, to make best use of fuels, and to limit the need for new capacity, especially in the situation we've had since the early seventies, in which we've had increasing marginal costs for electrical generation. So the more you build, the more your rates go up.

Utility systems in Texas vary widely. One system has an average annual residential usage of 6,000 kilowatt hours a year; another has an average annual usage of 14,000. Loads, temperatures, economies, uniform programs designed at the outset just really don't work very well.

Instead, what we intend to do in Texas is to continue efforts to bring about energy efficiency through State programs. Generally, our approach is to allow the utility company to design the program and we build in a series of incentives in some regards, and I guess it's both a carrot and a stick approach.

We have a Statewide load growth and generation plan for the State as a whole and for each utility. As part of that, we are attempting to quantify the amount that conservation and load management can contribute. We plan to specify a figure, and we plan to build that into our plan.

We recognize conservation and load management as a source of generation. We maintain energy efficiency division in the Public Utility Commission. We require each utility over 2,000 customers—

20,000 customers to submit an energy efficiency plan each year that is a cost and benefits plan. In other words, we want them to describe to us what their programs are, what the benefits of those programs are going to be, and what the costs are going to be.

We consider both quality of service and the efficiency with which a utility operates its system when we grant rate of return requests. We have that flexibility. And, lastly, in our new certification process for new generating capacity, it's a two-step process.

In the first step, a utility company must prove that they cannot gain the capacity from alternative sources such as cogeneration or such as conservation and load leveling. I don't claim that we have done all that we can or done all that we should in Texas, but we have made a strong start.

The companies are coming along. Some companies are actually ahead of us. Some of the better programs we have had: a number of commercial audit programs already in existence in the State. They are generally targeted at customers that are larger than CACS customers. That's where most of the energy savings can come from.

We've had some very successful equipment and lighting rebate programs which offer incentives for people to invest in higher efficiency equipment and higher efficiency lighting. At least three of the companies in Texas offer architectural and engineering predesign services with computerized evaluation. We have a very successful awards program in the Houston area for new design, and we are in the process of extending our computerized class B audit program from the residential to the commercial sector.

So bottom line is we don't feel that a uniform national mandated approach best fits the needs of ratepayers in Texas. Thank you.

[The prepared statement of Mr. Thomas follows:]

TESTIMONY OF DENNIS L. THOMAS
COMMISSIONER, PUBLIC UTILITY COMMISSION OF TEXAS
BEFORE THE ENERGY REGULATION AND CONSERVATION SUBCOMMITTEE OF THE SENATE ENERGY AND NATURAL RESOURCES COMMITTEE
IN SUPPORT OF SENATE BILL 410

MAY 6, 1985

GOOD MORNING. MY NAME IS DENNIS THOMAS, AND I AM ONE OF THREE COMMISSIONERS AT THE PUBLIC UTILITY COMMISSION OF TEXAS. THE PUBLIC UTILITY COMMISSION REGULATES THE ELECTRIC UTILITY INDUSTRY IN TEXAS. WE ALSO ADMINISTER BOTH THE RESIDENTIAL CONSERVATION SERVICE AND THE COMMERCIAL AND APARTMENT CONSERVATION SERVICE, AT THE DESIGNATION OF THE GOVERNOR.

I PERSONALLY HAVE BEEN ACTIVE IN THE ENERGY CONSERVATION EFFORT FOR A NUMBER OF YEARS AND IN A NUMBER OF DIFFERENT CAPACITIES. FOR FOUR YEARS, I EARNED MY LIVING IN THE PRIVATE SECTOR AS SENIOR VICE PRESIDENT OF AN ENERGY CONSULTING FIRM; I ALSO HAVE WORKED FOR THREE GOVERNORS IN OUR STATE. MY WIFE OWNS AND MANAGES A SMALL BUSINESS THAT WOULD QUALIFY FOR CACS.

LET ME GIVE YOU MY MESSAGE IN BRIEF. CACS IS A VESTIGE OF THE OLD EFFORTS AND IDEAS OF HOW TO ACHIEVE ENERGY CONSERVATION AND THE ENERGY NEEDS OF THE COUNTRY. OUR ENERGY NEEDS ARE NOT THE SAME NOW. THE RELATIONSHIP BETWEEN THE STATES AND THE

FEDERAL LEVEL IS NOT THE SAME NOW. THE FEDERAL COMMITMENT AND THE RESOURCES YOU ARE WILLING TO COMMIT ARE NOT THE SAME NOW, AND MOST IMPORTANTLY FROM OUR VIEW, THE RELATIONSHIP BETWEEN STATE REGULATORS AND THE UTILITIES IS NOT THE SAME. ACHIEVING EFFICIENT UTILITY SYSTEMS THAT CONSIDER THE IMMEDIATE NEEDS OF THEIR CUSTOMERS ALONG WITH THE LONG TERM NEEDS OF THE SYSTEM IS ONE OF MY MOST IMPORTANT RESPONSIBILITIES AS A REGULATOR. CACS DOES NOT FIT CURRENT NEEDS, BECAUSE IN TEXAS IT WILL NOT PRODUCE THE RESULTS REQUIRED.

THOSE OF US WHO HAVE WORKED IN ENERGY CONSERVATION OVER THE YEARS SHARE A COMMON FRUSTRATION: PROMOTING AND ENCOURAGING ENERGY CONSERVATION -- WHICH IS THE INTENT OF THE COMMERCIAL AND APARTMENT CONSERVATION SERVICE -- IS LAUDABLE, BUT IT'S NOT ENOUGH. CONSERVATION RESULTS MUST BE ACHIEVED. CONSERVATION MUST ACTUALLY HAPPEN TO DO ANY GOOD. INFORMATION PROGRAMS -- AND I INCLUDE ENERGY AUDITS IN THIS CATEGORY -- ARE HELPFUL TO CONSUMERS WHO SEEK INFORMATION. BUT UNLESS THE RECIPIENT TAKES ACTION, NOTHING IS ACHIEVED.

IN TEXAS, WE ARE TRYING TO ASSURE THAT ACTIONS ARE TAKEN AND RESULTS ACHIEVED. TO DO THIS, WE HAVE MOVED BEYOND UNIFORM, PRESCRIPTIVE APPROACHES. INSTEAD, WE RECOGNIZE THAT THE GEOGRAPHICAL, CLIMATIC, ECONOMIC AND DEMOGRAPHIC DIVERSITY AMONG UTILITY SERVICE AREAS IN OUR LARGE STATE REQUIRES INDIVIDUALLY TAILORED, RESULTS-ORIENTED EFFORTS. REGARDLESS OF WHAT HAPPENS TO THE CACS PROGRAM, WE WILL CONTINUE TO IMPLEMENT -- COMPANY BY

COMPANY -- CONSERVATION AND EFFICIENCY PROGRAMS THAT RECOGNIZE THE REAL WORLD, CHANGING CONDITIONS AFFECTING EACH UTILITY AND ITS CUSTOMERS.

WE MAKE A SPECIAL DEMAND OF ENERGY PROGRAMS IMPLEMENTED BY TEXAS UTILITIES: NOT ONLY MUST THEY SERVE THE END-USER; THEY ALSO MUST BENEFIT THE SYSTEM AS A WHOLE. THIS BROADER PERSPECTIVE CALLS FOR A BIGGER TERM THAN "CONSERVATION;" CONSERVATION DENOTES SAVING, OR DOING WITHOUT. WHAT WE AIM FOR IS "EFFICIENCY" IN THE USE OF LIMITED RESOURCES, BY BOTH THE UTILITIES AND THEIR CUSTOMERS. ONE ENTIRE DIVISION AT THE COMMISSION, THE ENERGY EFFICIENCY DIVISION, IS DEVOTED TO THIS EFFORT. THE DIVISION'S ACTIVITIES ARE SPLIT BETWEEN REGULATORY ACTIVITIES DIRECTED AT THE UTILITIES, AND INFORMATION AND TECHNICAL ASSISTANCE PROGRAMS TARGETTED DIRECTLY AT END-USERS.

TEXAS IS A GROWTH STATE; WE ESTIMATE THAT THE AVERAGE STATEWIDE DEMAND FOR ELECTRICITY WILL RISE 4% OVER THE COMING DECADE. IN SOME SERVICE AREAS, OF COURSE, THE INCREASE IN DEMAND WILL BE GREATER. THEREFORE, TO BENEFIT THE SYSTEM IN MANY SERVICE AREAS, EFFICIENCY PROGRAMS MUST BE GEARED TOWARD SHAVING THE PEAK DEMAND ON THE SYSTEM. AS YOU WELL KNOW, UTILITIES BUILD ADDITIONAL POWER PLANTS TO MEET THAT PEAK; IF THE PEAK CAN BE CONTROLLED, THE NEED FOR ADDITIONAL POWER PLANTS MAY BE DEFERRED OR AVOIDED ALTOGETHER.

GIVEN THE FINANCIAL CONDITION OF THE ELECTRIC UTILITY INDUSTRY AS A WHOLE AND THE BOND MARKETS WITH WHICH THEY MUST DEAL, WE FIND THAT UTILITIES CAN BE OUR ALLY IN TRYING TO RESPONSIBLY MINIMIZE THE AMOUNT OF NEW GENERATING CAPACITY THAT IS BUILT IN OUR STATE. WE HAVE CERTAIN REGULATORY REQUIREMENTS GEARED TOWARD THIS OBJECTIVE; BUT WE HAVE FOUND THAT MANY UTILITIES HAVE ON-GOING EFFORTS OF THEIR OWN, INITIATED INDEPENDENTLY OF OUR REGULATIONS. THEY FIND SUCH EFFORTS ARE GOOD PUBLIC RELATIONS, AND THEY ALSO BENEFIT THE SYSTEM AS A WHOLE.

LET ME TELL YOU ABOUT SOME OF OUR REGULATORY EFFORTS, AND THEN I'LL DESCRIBE SOME OF THE UTILITY PROGRAMS, TARGETTED AT COMMERCIAL AND APARTMENT CONSUMERS, THAT ARE OPERATING IN TEXAS.

TWO YEARS AGO, THE TEXAS LEGISLATURE AMENDED OUR ENABLING LEGISLATION, THE PUBLIC UTILITY REGULATORY ACT. THE THRUST OF SEVERAL OF THE CHANGES WAS TO INSTITUTIONALIZE ENERGY EFFICIENCY IN THE PLANNING OF THE ELECTRIC UTILITIES AND THEIR REGULATORS. FIRST, UTILITIES MUST FILE TEN-YEAR LOAD FORECASTS WITH US, SO THAT WE MAY DEVELOP THE OUTLOOK FOR THE STATE AS A WHOLE. ENERGY EFFICIENCY IS ONE OF THE "RESOURCES" THAT IS COUNTED IN THE TEN-YEAR PLAN. SECOND, IN REQUESTING A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR NEW GENERATING FACILITIES, THE UTILITIES MUST DEMONSTRATE THAT RENEWABLE RESOURCES AND ENERGY CONSERVATION

COULD NOT HAVE MET THE NEED FOR THIS ADDITIONAL CAPACITY. THIRD, A UTILITY'S ENERGY EFFICIENCY EFFORTS CAN BE CONSIDERED BY THE COMMISSION IN DETERMINING THE RATE OF RETURN.

IN ADDITION, THE COMMISSION ADOPTED AN ENERGY EFFICIENCY RULE A YEAR AGO. THIS RULE REQUIRES ALL UTILITIES WITH MORE THAN 20,000 CUSTOMERS TO FILE ENERGY EFFICIENCY PLANS WITH THE COMMISSION. THE PLANS MUST INCLUDE A DESCRIPTION OF THE GOALS AND OBJECTIVES OF THE ENERGY CONSERVATION EFFORTS, AND AN INDICATION OF HOW THE EFFORTS FIT INTO THE UTILITY'S OVERALL RESOURCE PLAN. BOTH SUPPLY- AND DEMAND-SIDE ACTIVITIES ARE INCLUDED; WE CALL THEM "UTILITY-CONTROLLED OPTIONS" AND "END-USER CONSERVATION PROGRAMS." A COST-BENEFIT ANALYSIS MUST BE CONDUCTED FOR EACH INDIVIDUAL PROGRAM. THIS IS TO UNDERSCORE THE IMPORTANCE OF PROGRAMS BEING COST EFFECTIVE AND BENEFICIAL TO ALL THE RATEPAYERS AND THE SYSTEM AS A WHOLE.

BECAUSE OF THE EMPHASIS ON HARD DATA IN THE ENERGY EFFICIENCY PLAN REQUIREMENTS, WE EXPECT TO HAVE A CLEAR IDEA OF WHAT WORKS AND WHAT DOESN'T, WHAT IS COST EFFECTIVE AND WHAT ISN'T. BY REQUIRING UTILITIES TO CONSIDER ENERGY EFFICIENCY IN THEIR CORPORATE PLANNING, WE ARE TAKING IT OUT OF THE PUBLIC RELATIONS DEPARTMENT AND INSTITUTIONALIZING IT IN THE UTILITY'S OWN OPERATIONS.

Texas is doing this because it is appropriate and right for our state, not because of a directive from the Federal government.

Now let me tell you what some of the electric utilities in Texas are doing in the energy efficiency arena. These efforts are not necessarily targetted exclusively at the small commercial end-user or apartment dweller. However, those classes of consumers are participating in and benefiting from the programs I am about to describe.

Texas utilities have about 40 programs up and running, targetted at the commercial sector. Several of the larger investor-owned utilities already conduct commercial energy audits. The distinguishing feature of these audits is that they focus on measures that will save energy on the peak. The audits emphasize proper sizing of air conditioning equipment, energy efficient lighting, thermal storage, and demand management. Not only does this save energy and a demand charge for the customer, it also helps moderate the peak. This is good for ALL ratepayers, not just those receiving the service, and it may contribute to deferring or avoiding the need for additional capacity.

One utility reports 60% implementation of recommended measures in 1,500 business audits it has conducted. The utility estimates a 22 kW capacity reduction and 85,000 kWh savings per audit, and it plans to do 300 audits each year.

A successful program among several Texas utilities has been the energy efficient appliance rebate approach. Geared primarily toward residential customers, it also attracts small business respondents, as well as apartment dwellers and builders. This is the kind of results-oriented, measurable activity we encourage. A couple of utilities effectively use this approach in commercial lighting programs. Again, this results in capacity reduction, the key problem in most service areas in our state.

Several utilities also offer computerized predesign services to their customers. The American Institute of Architects estimates that a properly designed, oriented, and constructed building can use less than half as much energy as its conventional counterpart. If utilities can help their customers design an energy efficient structure, both utility and customer will benefit. The customer will enjoy dramatically reduced energy costs, with little or no additional construction costs; the utility will have less additional burden on its peak. One utility presents awards for energy efficient commercial design.

In general, small commercial customers and apartment dwellers can benefit from information and rebate programs that

ARE TARGETTED MOSTLY AT THE RESIDENTIAL SECTOR. AN EXAMPLE IS A CLASS B COMPUTERIZED AUDIT SERVICE THAT FIVE UTILITIES IN THE STATE OFFER TO THEIR RESIDENTIAL CUSTOMERS. OVER 36,000 OF THESE AUDITS HAVE BEEN PROCESSED IN THE PAST YEAR; 15% OF THE RESPONDENTS HAVE BEEN APARTMENT DWELLERS.

A COMMERCIAL VERSION OF THIS CLASS B AUDIT IS UNDER DEVELOPMENT AND PROBABLY WILL BE OFFERED BY THE UTILITIES IN THE NEAR FUTURE. IT IS TARGETTED SPECIFICALLY AT SMALL, SOLE PROPRIETOR-TYPE COMMERCIAL OPERATIONS.

I DO NOT CLAIM THAT THE COMPANIES OR THE PUBLIC UTILITY COMMISSION HAVE DONE ALL THAT WE CAN OR SHOULD DO, BUT WE HAVE MADE A STRONG START. WE WILL CONTINUE TO WORK WITH THE UTILITIES ON THEIR ENERGY EFFICIENCY PLANS, SOMETIMES WITH A STICK AND SOMETIMES WITH A CARROT, AND TO SEARCH FOR BETTER SOLUTIONS TO INDIVIDUAL SERVICE AREA PROBLEMS. OUR BELIEF IS THAT A COOPERATIVE APPROACH BETWEEN UTILITIES AND THEIR REGULATORS, AND AN EFFORT TO TAILOR SOLUTIONS SPECIFICALLY TO REAL WORLD PROBLEMS, WILL RESULT IN COST EFFECTIVE, ENERGY SAVING, DEMAND SHAVING RESULTS.

A UNIFORM, PRESCRIPTIVE, MANDATED APPROACH SUCH AS CACS IS NOT AS EFFECTIVE AND MAY ACTUALLY BE COUNTER-PRODUCTIVE IN TEXAS. WE NEED RESULTS, AND PROGRAMS THAT WILL PRODUCE THEM. EACH COMPANY IS DIFFERENT AND A UNIFORM APPROACH LIKE CACS LETS BOTH THE COMPANIES AND THOSE OF US WHO ADMINISTER THE PROGRAM OFF TOO EASY.

Senator EVANS. Thank you. Mr. McLogan. I think we'll hear from both witnesses and then open both to questions from the panel.

STATEMENT OF MATTHEW E. McLOGAN, COMMISSIONER, MICHIGAN PUBLIC SERVICE COMMISSION

Mr. McLOGAN. Thank you very much, Senator. Good morning.

Though my colleague commissioner is the one from Texas, I guess I'm the Lone Ranger this morning because I'm from Michigan, the only State that has a program up and running, though in Michigan we call it the Michigan Business Energy Efficiency Program instead of CACS.

We oppose S. 410 as it's written because we like our program and we want to keep it. In Michigan, 50 percent of all gas and electric use is by commercial and industrial customers and we think saving their energy is just as important as saving the energy of residential customers. For that reason, we have expanded our program. We have interpreted DOE's rules liberally and allowed a great many small businesses to also qualify for services under CACS.

Second, we also think that the Congress would be sending the wrong signal. I believe that conservation must continue to be a national goal. In November 1984 the National Association of Regulatory Utility Commissioners established its first new standing committee in more than 15 years, the Committee on Conservation, and in its resolution NARUC said that reaffirming support for conservation is imperative.

Senator Evans is quite correct when he says the cheapest new energy we can get is the kilowatt we never have to build but the one we can save. CACS is working in Michigan. Our program is not burdened with the kinds of problems that have been suggested so far and that other witnesses are likely to bring to the committee this morning.

That's because our program went on line only after a 3-year effort, following an exhaustive pilot, a lot of private sector input, a half a dozen complaint hearings around the State, and then ultimately a program fashioned as a compromise with the staff of the Public Service Commission and the private sector. As a consequence, the order that my colleagues and I issued that implemented the program was without substantial opposition.

Though our program has only been publicized for a little over a month, already the requests for audits have exceeded projections. It's generating a lot of business for the private sector companies in Michigan that will actually do the work. In Michigan, the audit is arranged for by the utility but is done by the private sector, as is all the work. Consequently, our program ultimately is not subsidized and it is and will be cost effective. The only costs to the ratepayers are minimal amounts for publicity and recordkeeping.

Finally, the point I want to leave you with, and I think it's the most important message I have for the committee, I must respectfully disagree with Secretary Fitzpatrick when she says that repealing the bill will allow States to go forward on their own if they wish to, and we do wish to.

In Michigan there was a legal challenge to the RCS program, despite Federal rules, the congressional action, and order of the Commission and State enabling statutes, and the Federal court which ultimately dismissed the complaint and held for the Commission cited the Federal law and the underlying Federal statute in rejecting the complaint, and not the State statute or our enabling order.

We fear very much that if S. 410 as written now repeals CACS that the principal legal footing that would allow us to continue the program would be brought into jeopardy. Therefore, we would earnestly request the Congress first that it not repeal CACS but if in its wisdom it does so that you rewrite it in such a way that will clearly allow States like Michigan that have a program to continue to do it without legal imperative.

Thank you very much.

[The prepared statement of Mr. McLogan follows:]

TESTIMONY OF

MATTHEW E. McLOGAN, COMMISSIONER
MICHIGAN PUBLIC SERVICE COMMISSION

BEFORE THE

UNITED STATES SENATE
ENERGY AND NATURAL RESOURCES COMMITTEE

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

May 6, 1985

TESTIMONY OF
MATTHEW E. McLOGAN, COMMISSIONER
MICHIGAN PUBLIC SERVICE COMMISSION
BEFORE THE
UNITED STATES SENATE
ENERGY AND NATURAL RESOURCES COMMITTEE
SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

MAY 6, 1985

TABLE OF CONTENTS Page

A. Introduction and Purpose 1

B. Michigan's Experience With the RCS Program 2

C. Development of Michigan's CACS State Plan 3

D. Michigan Commercial Energy Audit Pilot 5

E. Actual CACS Program Experience 9

F. Need for Continued Federal Authority 11

G. Conclusion 13

Appendix: Commercial Energy Audit Service - Michigan Pilot Project Summary

TESTIMONY OF
MATTHEW E. McLOGAN, COMMISSIONER
MICHIGAN PUBLIC SERVICE COMMISSION
BEFORE THE
UNITED STATES SENATE
ENERGY AND NATURAL RESOURCES COMMITTEE
SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

MAY 6, 1985

INTRODUCTION AND PURPOSE

Chairman Nickles and members of the Subcommittee, my name is Matthew E. McLogan. I am a member of the Michigan Public Service Commission. Among the functions of our three-person Commission is the responsibility for regulating both gas and electric utilities. In addition, the Michigan Public Service Commission is the "lead agency" designated by the Governor to implement the Commercial and Apartment Conservation Service (CACS) program pursuant to Title VII of the National Energy Conservation Policy Act and the associated Final Rules. The Michigan Public Service Commission has been a strong proponent of utility energy conservation programs for over a decade.

The purpose of my testimony today is to speak out in opposition to S.410; to share with you some of Michigan's experiences with CACS; and to urge your support for continuing the CACS program. As a result of our experiences, we are convinced of the viability of the CACS program in terms of: the significant energy savings potential; the attractiveness of the service to small businesses and non-profit agencies; and the potential for positive impact on the business community in general.

A brief history of Michigan's involvement with federally mandated energy conservation programs may help provide you with a clear understanding of our position.

MICHIGAN'S EXPERIENCE WITH THE RCS PROGRAM

On October 14, 1978, Congress enacted PL 95-619, entitled the National Energy Conservation Policy Act (NECPA), one of a series of bills contained in the National Energy Act. It was signed into law on November 9, 1978. The purpose of NECPA as stated therein is: (1) to reduce the growth in demand for energy in the United States; and (2) to conserve nonrenewable energy resources produced in this nation and elsewhere, without inhibiting beneficial economic growth.

Title II, Part 1, of NECPA required that energy audit services be offered to residential customers in all states, pursuant to rules issued by the United States Department of Energy (DOE). The "Residential Conservation Service (RCS) Program" was implemented in Michigan by order of the MPSC in Case No. U-6700 on December 30, 1980.

Since that time, Michigan utilities have performed approximately 600,000 residential energy audits. Public acceptance of this program has been widespread. Based on several thorough and credible studies, we have found that the RCS Program is cost-effective as it is being operated in Michigan. The studies have concluded that the RCS program generates savings for Michigan citizens in excess of program costs in less than three years. The value of the energy saved to date is estimated to be in excess of $65 million. We strongly support the RCS program and the CACS program which complements it.

An important point to remember when considering these national programs is that they cannot do the job alone. Michigan has found that a synergy develops when national efforts are combined with state and local initiatives. For example, we attribute the dramatic success of our RCS program, in large part, to our effort to link the audit service to various residential financing and installation programs in the state. We are now developing similar programs to enhance the impact of the CACS program in the commercial sector.

DEVELOPMENT OF MICHIGAN'S CACS STATE PLAN

On June 30, 1980, the Energy Security Act (PL 96-294) amended NECPA by adding Title VII. Title VII expanded the requirements of Title II, Part 1, to include commercial buildings and residential buildings with five or more dwelling units.

In January 1981, the DOE issued proposed rules for CACS implementation. In response to the new law and the proposed rules, the Michigan Public Service Commission (MPSC) initiated a pilot to test ideas for designing a quality commercial energy audit service. The results of this 1982 pilot are described later in this document.

On October 26, 1983, DOE issued final rule 10 CFR, Part 458 (Docket No. CAS-RM-80-125) entitled, "Commercial and Apartment Conservation Service (CACS) Program."

On February 14, 1984, the MPSC issued a proposed State Plan and Notice of Opportunity for Public Comment. The Notice invited public comment which was heard at eight sessions around the state. Written comments were received until March 23, 1984.

In April, 1984 the draft State Plan was revised to incorporate concerns and suggestions expressed by those who commented. All comments were carefully considered; extra effort was made to ensure that the Michigan CACS program would act to spur the local economy rather than harm it.

In response to concerns that the CACS program could lead to utility competition with private firms in providing labor and materials for conservation improvements, a prohibition against utility supply and installation of program measures was added to the Michigan Plan. This is just one example of the ability of the MPSC, and presumably regulators in other states, to respond to legitimate concerns identified both locally and nationally within the constraints imposed by NECPA and the CACS Final Rules.

On July 12, 1984, Michigan became the first state to receive approval of its CACS State Plan. It is our understanding that so far 23 non-regulated utilities and 13 states have received approval of their CACS plans. Those states with plans approved by DOE are: Michigan, Rhode Island, Arkansas, Kentucky, Wisconsin, New Mexico, Montana, North Carolina, North Dakota, South Dakota, Indiana, California and Vermont.

The MPSC believes that the commercial audit program it adopted in August, 1984 incorporates the best interest of all Michigan citizens and businesses. We remain open to changing the program as needed.

We know that there is strong desire for utility-sponsored energy audit services in Michigan. This knowledge comes from the number of audit requests received by the utilities; from the results of the Michigan Commercial Energy Audit Pilot; and from public comments, such as this one from the Small Business

Association of Michigan, which said (in spite of some concerns about the CACS program): "Please know that our organization is pleased that this commercial conservation service will be available to our members across the state."

MICHIGAN COMMERCIAL ENERGY AUDIT PILOT*

In February, 1982, Detroit Edison, Consumers Power Company, Michigan Gas Utilities Company and the staff of the Michigan Public Service Commission agreed to participate in a pilot program to explore the feasibility of offering energy audits to commercial and industrial electric and gas customers. A task force consisting of representatives of all involved parties was created to establish pilot objectives, operating procedures and time schedules, administer all aspects of the pilot and prepare a report describing and summarizing the pilot experience. Approximately forty people, including utility company personnel, contract energy conservation specialists, suppliers of software for energy analysis calculations and report writing, customer survey interviewers, and Public Service Commission staff were directly involved in the project.

All of the utilities involved serve both urban and rural communities in Michigan. Industries in the area include automobile and automotive equipment; wholesale and retail trade; steel, chemical, cement and paper industries; pharmaceuticals, food products, oil refining, and manufacturers and fabricators of machinery and other metal products.

---

*See attached copy of Commercial Energy Audit Service - Michigan Pilot Project Summary.

PILOT ASSUMPTIONS

Based on past experience, discussions with other energy professionals, and review of industry publications, four general assumptions were adopted. Through the pilot we hoped to develop a better estimate of the extent to which they are true in Michigan.

1. Most buildings were constructed prior to 1978 during an era of low cost energy and were not designed to make the most efficient use of the energy required for their operation. Unless the buildings have been "retrofitted" with additional insulation, more efficient lighting systems, etc., energy is not being used efficiently at these facilities.
2. Many managers of businesses and non-profit agencies either: (a) have little knowledge of how their physical plant operates relative to how it could operate optimally or, (b) have given low priority to efficient operation of energy using systems.
3. If the two conditions described above exist, it must follow that there is a great opportunity for improved energy efficiency among commercial and industrial customers and for a significant associated dollar savings to those customers.
4. Energy audits are a worthwhile tool to help commercial and industrial customers: (a) identify areas of inefficient energy use, (b) learn what can be done to reduce energy costs, and (c) estimate which actions will be most cost-effective.

PILOT DESCRIPTION

The pilot had three primary objectives:

1. Test various ideas for potential service design.
2. Determine whether a statewide commercial and industrial audit program would be feasible for the utility companies and valuable to their customers.
3. Develop data for use in evaluating whether a statewide commercial and industrial audit program would be cost-justified.

In designing the pilot to meet these objectives, ten tasks were identified.

1. Determine staffing requirements.
2. Define which customers should be eligible for the service.
3. Identify conservation measures appropriate for commercial and industrial customers.
4. Explore inter-company coordination opportunities.
5. Develop/test standard methodologies.
6. Identify information needed for investment decisions by customers.
7. Determine customer preference for report format.
8. Determine the need for general customer information materials by commercial and industrial customers.
9. Explore load management opportunities which may be incorporated into a commercial and industrial audit program.
10. Investigate contractor referral mechanisms.

Seventy-three commercial and industrial customers of various sizes from across the state were audited. Building types included: office buildings, centrally heated apartments, retail outlets, grocery stores, restaurants/bars, entertainment centers, non-apartment living facilities, churches, warehouses, and small industrial plants. The selected facilities were intended to be representative of commercial and industrial customers throughout the state. Each utility provided auditors of various educational backgrounds and experience to audit the buildings using available software packages.

The audits entailed a review of historic consumption data, on-site inspection of the building envelope, system inspection (excluding industrial processes) and interviews with building personnel. In the majority of cases, a second visit was made to deliver the written audit report and explain the report to the building manager/owner. Customers were surveyed several days after receiving the audit report to help assess the value of the audit service.

PILOT CONCLUSIONS

We learned a great deal from this experience. Based on analysis of the potential for energy and dollar savings, the results of the customer surveys, and the experiences of all parties in conducting this pilot, a number of conclusions were drawn, including the following:

1. Commercial and industrial customers will welcome the availability of energy audit services from their utilities.
2. Commercial and industrial customers, in general, are willing to pay a moderate fee for services received.
3. Significant energy and dollar savings are potentially available. Average energy savings potential identified for audited customers is 18% of combined annual gas and electric consumption. Average combined energy savings anticipated, based on customer-planned installations, is 4%. These are very conservative estimates of the potential energy savings from the commercial sector.
4. Utility audit services will stimulate customer interest in cost control through energy management. This is expected to result in increased utilization of consultants, contractors and others to design, install and maintain energy efficient systems and facilities.

Customer reaction throughout the pilot was consistently positive. The great majority of those invited to participate in the pilot were willing and eager to do so. A resounding 97% of the customers interviewed after receiving their audits believed that other members of their industry would be interested in receiving a utility energy audit. Customers also indicated a willingness and even a preference to pay a moderate fee for the service. It is interesting to note that even in advance of the offering of CACS audits, people who heard about the Pilot began contacting the utilities to request audits. There is little doubt that customers are interested in a utility-sponsored commercial energy audit service.

This Pilot was completed in 1982. In anticipation of the issuance of CACS Rules by DOE, the MPSC worked to develop a viable State Plan utilizing the knowledge gained during the Pilot.

The result was a program designed to be available to most commercial and industrial customers in Michigan. This program will be funded almost exclusively through end-user fees. This has the simultaneous effect of minimizing both subsidies needed from ratepayers and potential anticompetitive impact on local contractors and consultants.

ACTUAL CACS PROGRAM EXPERIENCE

On August 7, 1984, the MPSC issued an order in Case No. U-7900 which adopted the State Plan. The following utilities began offering energy audits in early 1985:

1. Consumers Power Company
2. The Detroit Edison Company
3. Michigan Consolidated Gas Company
4. Michigan Gas Utilities Company
5. Indiana & Michigan Electric Company
6. Michigan Power Company
7. Southeastern Michigan Gas Company

The CACS energy audit is an evaluation tailored to a business customer's specific building and energy systems. During an on-site visit, the utility provides advice on reducing energy costs and improving energy efficiency. The written report received by the customer includes estimated installation costs and energy savings with the resulting paybacks for applicable measures.

Small businesses, non-profit agencies and apartment landlords are eligible to participate in the program at this time. Larger customers will be eligible in the future. The cost to the customer varies by utility and ranges from $50 to $600 depending on the size and other characteristics of the building. Most customers will be able to obtain an energy audit at a cost of $200 or less.

Since the initiation of the CACS Program in Michigan, audit requests have been received from all sectors of the business community. Many businesses with consumptions larger than the 4,000 kilowatt hour and 1,000 therm levels specified in NECPA have requested audits.

Although it is too early in the program to expound on its success, preliminary reports indicate a high level of customer satisfaction with the service as well as a great likelihood for energy savings.

Business owners and operators who have received program audits have uniformly expressed satisfaction. Positive aspects cited include: site-specific information, prioritization of investment options (relative cost and payback of different program measures) and identification of low cost/no cost actions which can be implemented quickly and easily.

The paybacks for these low cost/no cost actions alone have been found to justify the cost of the service in more than 80% of the audits completed to date.

In addition, some customers have found the audit reports useful in a way not specifically anticipated. We were recently pleased to learn that the CACS audit reports are an effective consumer protection device: customers use the estimated paybacks included in their reports as a means to check claims of savings previously received from vendors of conservation products. This use, while it will no doubt be disturbing to a few unscrupulous vendors, is effective in spurring customer investments in products that will truly benefit them.

NEED FOR CONTINUED FEDERAL AUTHORITY

At this point, I hope you are all convinced of the sincere and protracted effort made by the State of Michigan to design and implement the best CACS program possible. The service is finally beginning to "bear fruit" after more than four years of preparation. We don't want to lose it now.

Disregarding for a moment Michigan's commitment to the goals of NECPA and the value of the services mandated therein, there is a very practical reason why we oppose any action to repeal Title VII of NECPA.

Because the MPSC has no specific state program authority for CACS, the passage of S.410 will place the services I have described above in serious jeopardy.

Even with specific state legislative authority for residential conservation programs, the RCS program in Michigan has been subjected to legal challenge. All the Michigan utilities required to offer RCS and CACS audits (see list on page 9) have already been named in lawsuits wherein the plantiffs sought treble damages for alleged violations of federal antitrust laws. These alleged violations were attributed to the defendant utilities because of their participation in the RCS program.

In Case No. 83CV1080DT, the Federal District Court, Eastern District of Michigan relied heavily on the existence of the underlying federal law in dismissing the complaints mentioned above.

Even though most Michigan utilities are convinced that their customers welcome the availability of utility energy audit services, repeal of the federal CACS authority may well result in a withdrawal of those services from the customers who need them. As a result of their experiences with the lawsuits mentioned above, Michigan utilities understandably place special value on the guarantees and immunities incorporated into NECPA.

Even in the best post-repeal case, where the utilities proceed with the program under state authority, the program could be tied up for years with legal challenges.

The result of repealing CACS could very well have the following outcome in Michigan: numerous barber shops, soup kitchens, bowling alleys, churches and other facilities, both profit and non-profit, may be deprived of the benefit of choice in their efforts to learn how to reduce operating costs through energy conservation.

CONCLUSION

In conclusion, I'd like to emphasize the following points.

1. Due to potential legal entanglements, passage of S.410 may result in the termination of a long anticipated commercial energy audit service in Michigan.
2. Michigan has operated in good faith to comply with a Congressional mandate. Extensive investments of time, effort and money have gone into the preparation for CACS program implementation. This is no doubt true, in greater or lesser degrees, for all the states and non-regulated utilities who have filed plans with DOE. Cancelling the program now just as everything is starting up would destroy the momentum, even for states which choose to continue on their own.
3. The Michigan Public Service Commission supports NECPA's goals of increasing U.S. energy independence and improving national energy efficiency. Further, we believe it is appropriate that utilities be required to make use of their unique positions and specialized knowledge to help achieve those goals through demand-side programs. Repealing CACS is inconsistent with a sustained effort toward national energy security and independence.
4. The passage of this bill would send a clear signal from Congress that energy efficiency and energy conservation efforts are no longer in the public interest. Such an unfortunate action would encourage complacency in the way citizens and businesses throughout the United States use their finite energy resources.
5. The potential for energy savings in Michigan's commercial and industrial marketplace is substantial. Commercial and industrial customers use more than 50% of the gas and electricity sold in Michigan. If only 5% of the energy consumed by these sectors could be saved, the result would be a savings for Michigan businesses of over $200 million per year at present rates. The potential energy savings available from the commercial and industrial sectors nationally, even after a decade of efficiency improvements, is still of impressive magnitude.
6. In Michigan, we have designed a program with virtually no rate impact. What this means is that the end-users have to pay for the full cost of the audit. And, at the same time, potential damage to private audit contractors is avoided. In spite of initial price resistance, the great majority of business owners who have paid approximately $200 for an energy audit have seen that they can recoup that investment simply by implementing the no cost/low cost practices identified for them at the time of the audit. Other cost effective energy savings opportunities are regularly being identified for energy customers throughout the state. This program deserves an opportunity to succeed.

On behalf of the Michigan Public Service Commission, I urge you to oppose S. 410, as well as the two related House bills, H.R. 969 and H.R. 929. If you and your colleagues are persuaded that the energy audit programs created by NECPA are not currently constructed in the optimum public interest, please take the time to carefully and thoughtfully revise and improve, rather than terminate them. Retreat at this point sends the wrong signal. It jeopardizes a promising cost effective program which even in its infancy has shown the ability to save huge amounts of energy and money.

Thank you very much for the opportunity to present our views on this important issue and for your gracious consideration.

Commercial Energy Audit Service

Michigan Pilot Project Summary

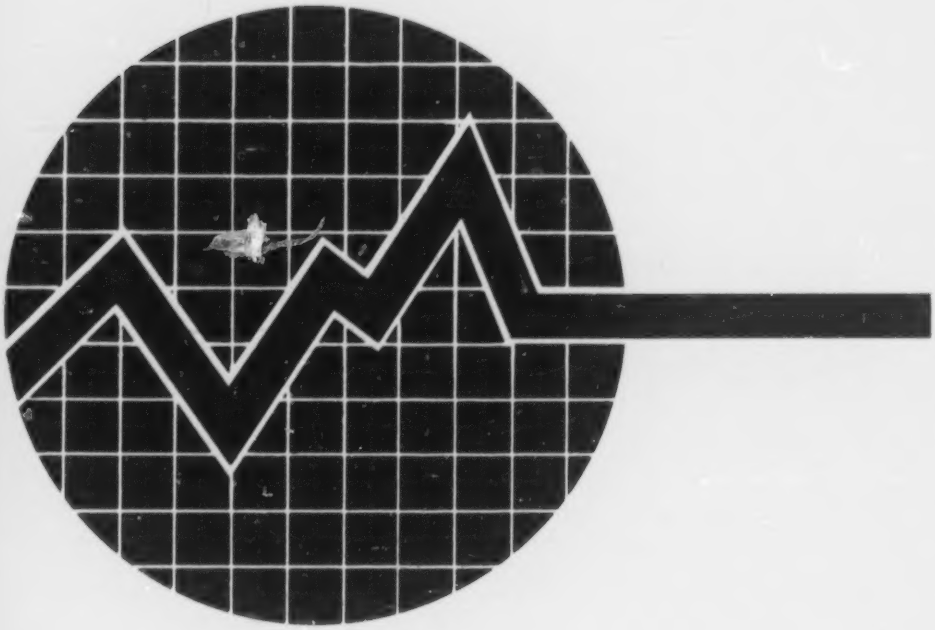


Table of Contents

Page

Executive Summary 3

Background 5

Assumptions 7

Pilot Description

Objectives 8

Project Design and Implementation 8

Evaluation Components 10

Pilot Findings

Customer Survey 12

Evaluation of Conservation Potential 23

Conclusions 32

Appendix

Energy Conservation Measures 38

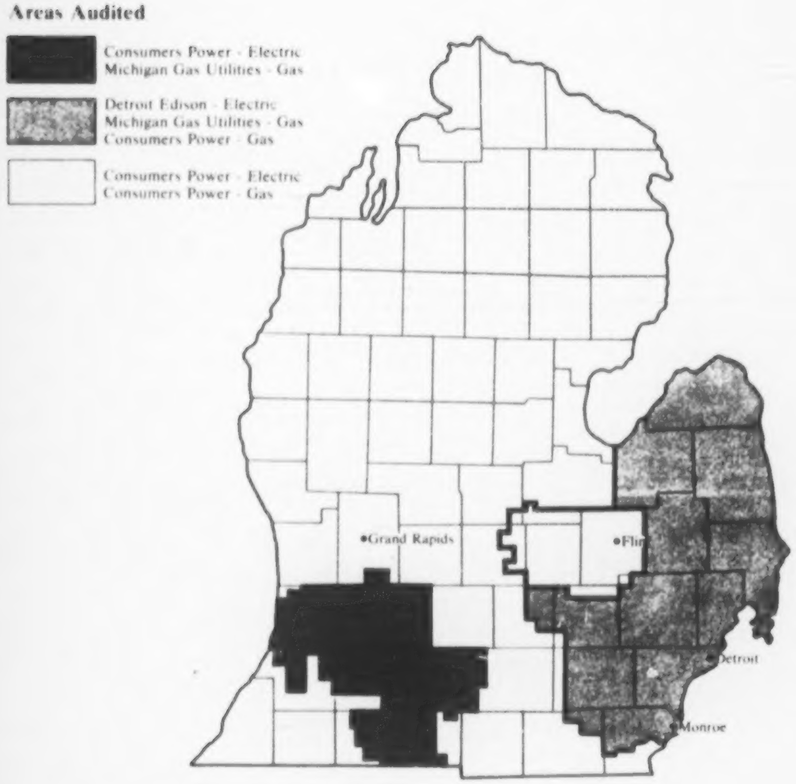
Inquiries regarding this report should be addressed to the project manager, Janet Chance Hanneman of the Michigan Public Service Commission. Other questions regarding the pilot may be addressed to any of the following key project committee members:

Michigan Public Service Commission
Janet Chance Hanneman
P.O. Box 30221
Lansing, MI 48909
(517) 373-8693

Detroit Edison
Lennox E. Sheppard
1034 G.O.
2000 Second Avenue
Detroit, MI 48226
(313) 237-6355

Michigan Gas Utilities Company
Harry L. Burrington
899 S. Telegraph Road
Monroe, MI 48161
(313) 242-4100

Consumers Power Company
C. Joe Herron
H-518B
212 W. Michigan Avenue
Jackson, MI 49201
(517) 788-0809


Areas Audited
Consumers Power - Electric
Michigan Gas Utilities - Gas
Detroit Edison - Electric
Michigan Gas Utilities - Gas
Consumers Power - Gas
Consumers Power - Electric
Consumers Power - Gas
Grand Rapids
Flint
Detroit
Monroe

Acknowledgements

The following people or companies have significantly contributed to the success of this project.

Paul Proudfoot of the Michigan Public Service Commission
Stephen Etsler, John Yang, Cynthia Evans Westerhof and Patrick Pudvay of Consumers Power Company
John Zook and Michael Cappelletty of Michigan Gas Utilities Company
Robert Briggson and James Stawski of Detroit Edison
Mike Nault of Brothers Energy Resources, Inc.
William Streetman and Anthony Kabacinski of Equifax Services, Inc.
Garry Muma of Volt Energy Systems, Inc.
Xenergy, Inc.
Enercom, Inc.
Honeywell Information Systems, Inc. and
The Bickle Group.

Executive Summary

Background

Michigan business and industry is presently faced with the most serious economic crisis in many years. In their efforts to survive these financially rigorous times, business people throughout the state have been exploring new opportunities for cost control.

The rapidly escalating cost of energy is prompting ever closer scrutiny of energy use by business managers.

One result of this is a marked increase in requests made to utilities and governmental agencies for energy management information.

In response to that demand and clear need, in February 1982, Consumers Power Company, Detroit Edison, Michigan Gas Utilities Company and the Michigan Public Service Commission staff agreed to participate in a pilot program to determine the feasibility of offering energy audits to Commercial and Industrial energy customers throughout Michigan.

Objectives

The pilot had three primary objectives:

1. Test various ideas for potential service design.
2. Determine whether a state-wide Commercial and Industrial audit program would be feasible for the utility companies and valuable to their customers.
3. Develop data for use in evaluating whether a state-wide Commercial and Industrial audit program would be cost-justified.

In designing the pilot to meet these objectives, ten sub-objectives were identified:

1. Determine staffing requirements.
2. Define which customers should be eligible for the service.
3. Identify conservation measures appropriate for Commercial and Industrial customers.
4. Explore inter-company coordination opportunities.
5. Develop/test standard methodologies.
6. Identify information needed for investment decisions by customers.
7. Determine customer preference for report format.
8. Determine the need for general customer information materials by Commercial and Industrial customers.
9. Explore load management opportunities which may be incorporated into a Commercial and Industrial audit program.
10. Investigate contractor referral mechanisms.

Pilot Activities

Seventy-three Commercial and Industrial customers of various sizes were selected from across the state. Building types included office buildings, centrally heated apartments, retail outlets, grocery stores, restaurants/bars, entertainment centers, non-apartment living facilities, churches, warehouses, and small industrial plants. Although the customer sample was not statistically valid, it was felt that the selected facilities were representative of Commercial and Industrial customers throughout the state. Each utility provided auditors of various educational backgrounds and experience to audit the buildings using available software packages.

The audits entailed a review of historic consumption data, on-site inspection of the building envelope, system inspection (excluding industrial processes) and interviews with building personnel. In the majority of cases, a second visit was made to deliver the written audit report and explain the report to the building manager/owner. Customers were surveyed several days after receiving the audit report to help assess the value of the audit service.

Conclusions

Based on analysis of the potential for energy and dollar savings, the results of the customer surveys, and the experiences of all parties in conducting this pilot, the following conclusions were drawn:

- Assuming adequate financing and sufficient lead time, it is feasible for Michigan's utility companies to offer energy audit services to their Commercial and Industrial customers.
- Commercial and Industrial customers will welcome the availability of such a service.
- Commercial and Industrial customers, in general, are willing to pay for services received.
- Significant energy and dollar savings are potentially available. Average energy savings potential identified for audited customers is 18% of combined annual gas and electric consumption. Average combined energy savings anticipated, based on customer-planned installations, is 4%.
- The majority of energy audits for these customers could be conducted by non-engineers with appropriate training.
- Eligibility for energy audit services should be extended to all Commercial and Industrial customers. Some phasing in by rate class or building size may be necessary.
- The measures found to be most appropriate for existing commercial and industrial facilities can be placed into the following general categories:
    - Thermostat setback/setup
    - Lighting
    - Building envelope
    - Heating equipment improvements
    - Proper system maintenance
    - Domestic hot water system improvements
    - Pipe and duct insulation
    - Heat recovery
    - Cooking/dishwashing improvements
    - Cooling and ventilation system improvements
- Specific cost and payback estimates should be provided to induce investment in energy conservation measures.
- The customers audited preferred site-specific information and personalized attention.
- Utility audit services will stimulate customer interest in cost control through energy management. This is expected to result in increased utilization of consultants, contractors and others to design, install and maintain energy efficient systems and facilities.

Recommendations

The staff of the Michigan Public Service Commission, Michigan Gas Utilities Company, Consumers Power Company and Detroit Edison all agree on the following recommendations:

1. Commercial and Industrial Energy Audit Services should be offered by Michigan utility companies.
2. The Michigan Public Service Commission should facilitate utility efforts to provide these needed services by authorization of timely recovery of associated developmental and implementation costs.
3. Each utility should be allowed the flexibility to design its own Commercial and Industrial Energy Audit Services.
4. Every effort should be made to design energy audit services which can become self-supporting, as opposed to those which will require continuing subsidy by ratepayers.

Background

What is a commercial energy audit?

For the purpose of this report, a commercial energy audit is defined as the service provided by a qualified energy specialist for a Commercial or Industrial energy customer which includes on-site data gathering, analysis of energy used by the various systems and components of a building, energy management advice, and a report to the customer recommending measures for more efficient energy use. The audit report includes:

a. a description of the customer's existing energy use patterns;

b. estimated energy and dollar savings to be obtained from implementing certain recommended measures;

c. discussion of the proper applications of the recommended measures and description of the measures;

d. estimated costs for installing the measures where possible, and

e. financial analysis of the cost of the measures versus the energy savings.

Why were commercial energy audits tested in Michigan?

Three major factors prompted our interest:

1. In July of 1981, Michigan utilities began offering energy audits to residential energy customers. The high demand for those audits and the positive customer response to them has earned Michigan a position of national prominence for its version of the federally mandated Residential Conservation Service (RCS) program. Although this program is limited to Residential customers, small business owners, landlords of centrally heated apartment buildings and operators of non-profit agencies have been contacting both the utility companies and the Michigan Public Service Commission to request energy audits. In general, only limited services are available to those customers at present.

2. The National Energy Conservation Policy Act (PL 95-619) as amended by the Energy Security Act, requires electric utilities with annual sales of over 750 million kilowatthours and gas utilities with annual sales of over 10 billion cubic feet to offer energy audits for "commercial buildings and multifamily dwellings". A plan for implementing such a program must be submitted to the federal government not later than 180 days after final rules are issued by the designated federal agency. Although these rules have been greatly delayed, they are expected in 1983. Actual field experience will be invaluable in the design and implementation of a mandated commercial energy audit program. In addition, any commercial audit service developed and offered by utility companies in advance of a federal mandate may be granted "conditional program" status. This would allow the company to gain either (a) extra time to bring its service in line with federal rules or (b) approval of its existing service as being substantially in compliance with the criteria set up in the federal rules.

3. Michigan has been extremely hard hit with economic difficulties in recent years. With the cost of doing business continually increasing in the face of generally decreasing sales, business owners face the choice of going out of business, moving out of the state, or finding new ways to decrease operating costs. One relatively unexplored avenue is better management of energy usage. Many building operators, especially those of small businesses and non-profit agencies, do not have a clear understanding of how energy is currently being used in their facilities and even fewer understand that there are cost-effective ways to improve this usage pattern.

Historically, utility companies have provided service and information to their customers on the proper and safe usage of energy. As the cost of this energy goes up, information on efficient energy use is increasingly in demand. Even in the absence of any federal or state mandate, utility companies must enhance their ability to respond to customer needs for specific energy management information. Energy audits appear to be an excellent way of providing this service.

How did the pilot get started and who was involved in it?

In February, 1982, Detroit Edison, Michigan Gas Utilities Company, Consumers Power Company and the staff of the Michigan Public Service Commission reached mutual agreement regarding participation in a pilot program to explore the feasibility of offering energy audits to Commercial and Industrial electric and gas customers. A task force consisting of representatives of all involved parties was created to establish pilot objectives, operating procedures and time schedules, administer all aspects of the pilot and prepare a report describing and summarizing the pilot experience. Approximately forty people, including utility company personnel, contract energy conservation specialists, suppliers of software for energy analysis calculations and report writing, customer survey inverviewers, and Public Service Commission staff were directly involved in this project.

More about the utility companies involved

All of the companies operate in the lower peninsula of Michigan and serve both urban and rural communities. Industries in the area include automobile and automotive equipment; wholesale and retail trade; steel, chemical, cement and paper industries; pharmaceuticals, food products, oil refining, and manufacturers and fabricators of machinery and other metal products.

CONSUMERS POWER COMPANY is engaged in generation and purchase of electricity and its distribution and sale in 1,542 communities and townships representing a large portion of the lower peninsula of Michigan excluding the Detroit area; and in the purchase of natural gas and its distribution in 788 communities. The population of the territory served is estimated in excess of 5,270,000 within an area of 31,500 square miles in 67 of 68 counties in the lower peninsula. Overall the company has about 1.3 million electric customers and 1.1 million gas customers. Approximately 428,000 of these are both electric and gas customers. Electric generation capacity is 6,838 megawatts.

For the year ending June 1982, Consumers Power Company had a total average of approximately 130,000 electric Commercial customers and 8,000 electric Industrial customers. Sales to those customers were approximately 6.2 billion kilowatthours (kWh) and 9.9 billion kWh, respectively. For the same time period, Consumers Power Company had approximately 68,000 gas Commercial customers and 7,000 gas Industrial customers. Sales to those customers were approximately 66 million MCF (thousand cubic feet) and 69.7 million MCF, respectively.

In July 1982, Consumers Power initiated a "walk-thru" audit program for Commercial and Industrial customers. Although this program has not been actively promoted, as of September 1, 1982, approximately 250 customers had received "walk-thru" audits. These audits are designed to help customers become more aware of energy conservation opportunities in their facilities. Customers are left with general information brochures on how to implement measures recommended by the auditor. The "walk-thru" audits do not approximate the commercial audits being tested in this pilot.

DETROIT EDISON serves approximately 1,767,000 electric customers in southeastern Michigan. During 1981, the company derived about 31% of its electric revenues from sales to Residential customers, 37% from Industrial and 21% from Commercial sales, with the balance of 11% from municipalities and wholesale customers. Total sales in 1981 were 34 billion kilowatthours.

For twelve months as of June 1982, Detroit Edison had a total average of 138,768 Commercial customers and 2,293 Industrial customers. Sales to those customers were approximately 6.3 billion kWh and 14.5 billion kWh respectively. Detroit Edison serves approximately 5 million people in southeastern Michigan. Electric generation capacity is approximately 8,234 megawatts.

Detroit Edison has been performing audits and making available energy conservation opportunities to its Industrial customers and to a lesser extent its Commercial customers. The nature of these services is as follows:

1. Providing architects, engineers and consultants with computerized heat loss and heat gain calculations which include rate analysis for various fuels;
2. Providing up-to-date information concerning energy related opportunities to architects and engineers via exhibits, newsletters and seminars;
3. Providing a ready reference library of energy management related articles, publications, and pertinent equipment suppliers to assist customers in evaluating energy proposals;
4. Assisting municipalities, hospitals and schools in developing programs which allow them to participate in federally funded grant programs;
5. Actively assisting large Commercial and Industrial customers in conducting energy audits of their existing facilities.

Nearly 1,000 customers have requested some type of commercial or industrial audit service in the past year.

MICHIGAN GAS UTILITIES COMPANY, a subsidiary of Michigan Energy Resources Company, is engaged primarily in the business of distributing natural gas to approximately 105,000 customers in over 50 cities, towns and villages and 85 townships, located principally in the southeastern and western portions of the lower peninsula. The total population of the area served is approximately 500,000.

During 1981, gross operating revenues were derived 38% from sales of gas to Residential customers, 45% from sales to major Industrial customers and 17% from Commercial and other sales. Total sales volume for 1981 was 34,640,000 MCF.

As of June 1982, Michigan Gas Utilities had a total of 9,400 Commercial and Industrial customers. Annual sales of the General Service Rate classification were approximtely 7 million MCF. Additional optional and interruptible rate classifications used 15.4 million MCF. Currently, Michigan Gas Utilities has no formal conservation services available to Commercial or Industrial customers. Minor marketing studies for natural gas conversions are made available to these customers periodically or upon request. In the absence of any formal program, 300 to 500 unsolicited requests per year are received for some form of commercial or industrial energy audit.

Assumptions

What assumptions were we trying to verify in the pilot?

Based on past experience, discussions with other energy professionals, and review of industry publications, four general assumptions were adopted. Through the pilot we hoped to develop a better estimate of the extent to which they are true in Michigan.

1. Most buildings were constructed prior to 1978 during an era of low cost energy and were not designed to make the most efficient use of the energy required for their operation. Unless the buildings have been "retrofitted" with additional insulation, more efficient lighting systems, etc., energy is not being used efficiently at these facilities.
2. Many managers of businesses and non-profit agencies either (a) have little knowledge of how their physical plant operates relative to how it could operate optimally or (b) have given low priority to efficient operation of energy using systems.
3. If the two conditions described above exist, it must follow that there is a great opportunity for improved energy efficiency among Commercial and Industrial customers and for a significant associated dollar savings to those customers.
4. Energy audits are a worthwhile tool to help Commercial and Industrial customers: (a) identify areas of inefficient energy use; (b) learn what can be done to reduce energy costs; and (c) estimate which actions will be most cost-effective.

Pilot Description

Objectives

There were three primary pilot objectives.

1. Test various ideas for potential program design.
2. Determine whether a statewide commercial audit program would be feasible for the utility companies and valuable to their customers.
3. Develop data for use in evaluating whether a statewide commercial audit program would be cost-justified.

In designing the pilot to meet those objectives, ten key elements were identified. These elements will be discussed more fully later in the report. Very briefly these elements or sub-objectives were as follows:

1. Determine staffing requirements.
2. Define customer eligibility;
3. Identify conservation measures appropriate for Commercial and Industrial customers;
4. Explore inter-company coordination opportunities;
5. Develop/test standard methodologies;
6. Identify information needed for investment decisions by customers;
7. Determine customer preference for report format;
8. Determine need for general customer information materials by Commercial and Industrial customers;
9. Explore load management opportunities which may be incorporated into a commercial audit program.
10. Investigate contractor referral mechanisms.

Project Design and Implementation

Facilities Audited

Sector		Number
1	Office buildings	7
2	Centrally heated apartments (including elderly housing)	5
3	Retail stores	7
4	Grocery stores	7
5	Restaurants/bars	6
6	Entertainment centers*	5
7	Non-apartment living facilities**	7
8	Churches	6
9	Warehouses, Auto dealership	7
10	Small industrial plants	16
		73

*Includes a roller skating rink, two theaters, a bowling alley and a Y.M.C.A.

**Includes three motels, three nursing homes and a seminary.

Geographic distribution

Geographically these customers are located on both sides of the lower peninsula: 18 in the Detroit Metropolitan area, 16 near Flint, 14 in the Monroe area and 25 on the west side of the state between Kalamazoo and Grand Rapids. (See map on page 2.)

Most audits were conducted in areas where the service territories of two of the utility companies overlap. Twenty-three audited customers were joint Detroit Edison electric, Consumers Power gas customers; 13 were joint Detroit Edison, Michigan Gas Utilities customers; 25 were joint Consumers Power electric, Michigan Gas Utilities customers; and 9 were combination gas and electric customers of Consumers Power Company. Three were all-electric customers of Detroit Edison.

More about the audited customers

Audited buildings ranged from 930 to 240,000 square feet in size. The buildings consumed from 480 to 46,000 hundred cubic feet (ccf) of natural gas per year and used 1,800 to 8,000,000 kilowatthours (kWh) of electricity annually. For those electric customers on a demand rate, maximum monthly demand ranged from 16 to 2,900 kilowatts (kW).

The total annual energy consumption of pilot audit recipients is shown below in units and dollars. The costs shown represent composite charges which include demand charges, service charges and surcharges.

Annual Energy Consumption by Sector

Sector	kWh	kWh $	ccf	ccf $
1. Office Buildings	597,244	40,500	53,981	23,852
2. Apartments	623,859	45,162	242,234	94,716
3. Retail Stores	960,670	73,622	37,974	16,922
4. Grocery Stores	2,029,606	119,349	37,753	16,029
5. Restaurants/Bars	1,082,158	65,899	80,932	35,904
6. Entertainment Centers	1,115,271	77,568	111,556	47,935
7. Non-apartment Living Facilities	2,036,132	144,667	257,818	115,126
8. Churches	261,359	20,042	73,938	32,001
9. Warehouses	2,099,722	140,728	336,068	149,558
10. Industrials	16,553,042	956,968	1,996,174	821,608
Total for All Sectors	27,359,063	1,684,505*	3,228,428	1,353,651**

*$.0615 per kWh
**$.4193 per ccf

The buildings ranged in age from 2 years to over 100 years old. Only a few of the customers had existing energy management plans, although most of them had identified energy costs as one of their concerns.

Decisions that shaped the pilot

In addition to the selection of customers to include in the pilot, several other key decisions were made which effectively shaped the pilot experience.

1. **Use of commercially available software packages.** Although commercially available software packages have been successfully used in conducting residential energy audits, there was some doubt among the utility personnel that such packages could be flexible enough to handle the extremely varied energy systems and conditions found in the Commercial and Industrial customer classes. Therefore, it was decided to test three commercially available software packages. Audits were processed on all three to compare consistency of results, ability to accommodate unusual situations, ease of use, and customer acceptance of report format and content. To provide a further basis for comparison, a private commercial auditing firm was hired to conduct some of the audits using a programmable calculator and a manual report writing process.
2. **Development of engineering and financial methodology.** In order to allow for completion of the pilot in a timely fashion, it was decided not to develop a "model audit". Instead, the financial and engineering calculation methodologies of the software packages were reviewed and tested, standard fuel efficiencies were agreed to and standard costs for implementation of recommended measures were used. The task force spent a considerable amount of time developing calculations for use, when appropriate, in evaluating alternate fuel sources for a customer. However, few applications for alternate fuel evaluations were found during the course of the pilot.
3. **Conservation measures.** In developing the list of measures most applicable in Michigan, the pilot committee reviewed: (a) the conservation and renewable resource measures proposed by the United States Department of Energy for the "Commercial and Apartment Conservation Services" program; (b) measures currently included in various programs around the country and; (c) other measures suggested by the experience of participating utility company engineers.

To provide a common base of understanding about the conservation measures included in this pilot, the Appendix briefly describes the measures referred to in this report.

4. **Auditor selection and training.** The auditors selected for the pilot included three company engineers experienced with commercial and industrial energy use and processes, two junior company engineers, three company or contract commercial energy management consultants, and three company or contract employees with backgrounds in residential energy use.

   The training provided for the auditors during the pilot was primarily in the proper methods of data gathering and data entry for the three software systems tested. There were eight days of formal training, five of which included actual field experience.

Customer information materials. Customer information materials distributed to pilot audit recipients were from two sources: (a) information currently available from company resources and (b) trade association brochures. The subjects covered in these materials included lighting systems, heating, ventilating and air conditioning (HVAC) systems; food preparation, storage and handling; hot water systems; and some information specific to certain types of facilities such as churches and restaurants.

In addition to these materials, each audit report provided general text relating to measures recommended for that customer.

6. **Contractor referral mechanism.** In the Residential Conservation Services program, a list of licensed contractors is made available to energy audit recipients. There is some doubt, however, about the value of a similar service to Commercial and Industrial customers. These customers are more likely to have established relationships with contractors who could either install the recommended measures or refer them to others.

   The approach taken in the pilot was to advise customers as to the type of specialist required to install certain measures. For example, "Before proceeding with this measure, you are advised to check with a qualified lighting engineer."

7. **Public health and safety codes.** In order to provide a credible service to Commercial and Industrial customers, it is important that those making recommendations for changes in energy use be familiar with legal codes relating to energy using systems. In 1977, Michigan adopted The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90-75 as its State Energy Code. Although this code applies to new construction, in many cases existing facilities making significant physical plant changes must also comply with code. In addition, there are many other codes under the jurisdiction of the Michigan Department of Public Health, Michigan Department of Labor, Michigan Department of State Police, Michigan Department of Agriculture and municipal agencies which impact businesses operating within this state.

   Health and safety codes commonly provide standards for fire safety; ventilation, lighting and space conditioning for health care facilities, proper conditions for food preparation, handling and service; and proper ventilation for industrial processes. Energy auditors should also be familiar with standards recommended by industry and trade associations.

8. **Confidentiality of customer records.** In the course of reviewing and evaluating a customer's energy use, an auditor needs access to certain information which is proprietary to a business. In order to alleviate any customer concerns about use of their records in evaluating this pilot, customers were assured that their identities would not be revealed in this report without prior approval.

Evaluation Components

Several variables were reviewed in evaluating pilot experiences. These were:

1. Customer profiles including: (a) energy consumption histories and end uses; (b) age and construction characteristics of the facilities; (c) number of employees, customer traffic volumes and hours of operation; (d) age and current usage patterns of equipment; (e) type and quantity of energy-using equipment and fixtures and (f) numerous other data either gathered by the auditor or provided by the customer.
2. Energy audit reports including: (a) all recommended measures; (b) estimated installation costs and paybacks and (c) additional recommendations not addressed in the formal report. Examples of these include suggestions for power factor improvement, reducing peak

demand, and recommendations for installing measures not evaluated by the program chosen for a particular customer.

In a few cases alternate fuel usage was evaluated. These evaluations assumed that the alternate fuel source was already available at the site.

3. Auditors completed a questionnaire regarding their experience with each audit and included suggestions for improving the audit service. This was very helpful in identifying areas where standardized audit packages needed additional development and providing insight into customer needs. The responses were not included in any quantified analysis, but used to help interpret other results.

4. As customers were contacted and offered a free pilot energy audit, each agreed to participate in a survey of opinions on the energy audit. The majority of the surveys were conducted over the telephone, although a few customers were interviewed in person. Survey interviews lasted 20 to 30 minutes each.

   Interviews were conducted by company personnel (other than those participating in the pilot) according to standardized instructions.

5. Members of the Public Service Commission staff (in addition to those directly involved in the pilot) participated in approximately 25% of the pilot audits. These staff members provided written comments regarding the audits. Their opinions provided yet another viewpoint on the commercial energy audit experience.

Pilot Findings

Customer Survey

In order to evaluate customer reactions to the proposed service, customers who received pilot energy audits were surveyed for their opinions.

Survey Design

The survey was designed in three parts.

Part I consisted of questions about the audit report.

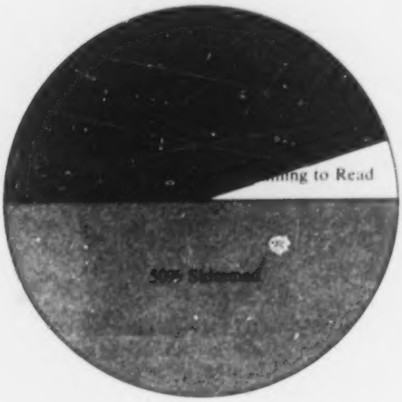
Part II elicited reactions to the consultant, the audit process and the audit recommendations.

Part III included questions regarding the value of the audit services.

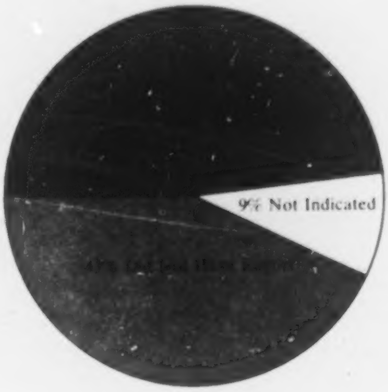
Survey interviews were completed with 61 of the 73 customers participating in the pilot. Three surveys were discontinued after the first question.

Customer Survey Results
Part I

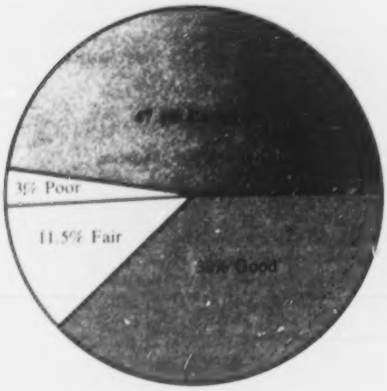
Q#1. How thoroughly was the report read?



Q#2. Did customer have report available during interview?



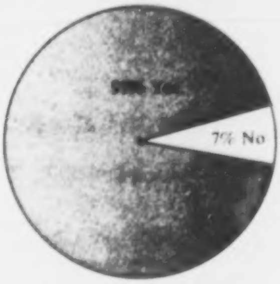
Q#3. Rating of report format



Comments from the two customers who rated the report format "poor" are paraphrased below.

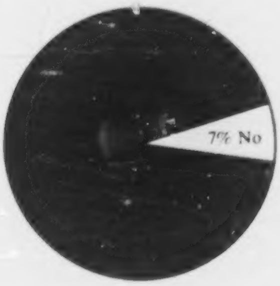
- "It could have been more professional." This comment was made by an Industrial customer whose report was printed on-site.
- "The costs shown in the savings calculations were too low." The apartment manager who made this comment believed it would cost more to implement the recommended measures than the report indicated. This customer further stated that there were "too many errors" in the report, but declined to cite any specific examples.

Q#4. Was the report understandable?



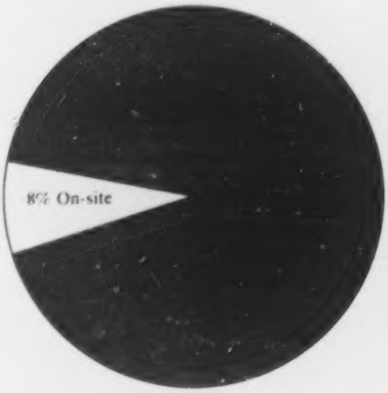
Comments from the 7% who did not find their report understandable indicated that it was too technical.

Q#5. Did the report provide enough detail?



Comments from the 7% who were dissatisfied with the level of detail were evenly split between those who felt there was too little detail and those who felt there was too much detail.

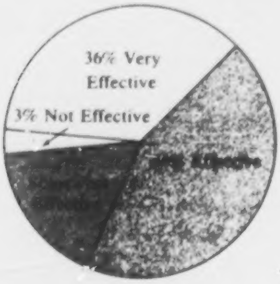
Q#6. Was report printed on-site using a portable computer terminal?



Of the 8% who had an "on-site" audit (and were able to be surveyed) most said that they liked it. Indications are that smaller customers were more satisfied with this process and its results than were larger customers.

Part II

Q#7. How effective was the audit in providing energy conservation information?



It seems clear from these responses that the great majority of the customers surveyed felt that they did learn from the audit.

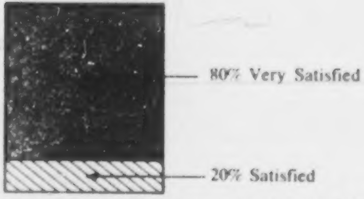
One of the respondents who felt that the audit was not effective was the operator of a living facility for elderly citizens. His comment was this: "A community service organization did an energy audit for one of our other buildings. *They* told us exactly what needed to be done and how to do it. We're looking for guidance, not theoretical information."

The manager of a medium-sized industrial plant stated that the audit was unsuccessful in providing new information on energy conservation. This customer received an "on-site" audit which according to him, "Did not answer the proper questions."

Q#8. Level of satisfaction with auditor and audit

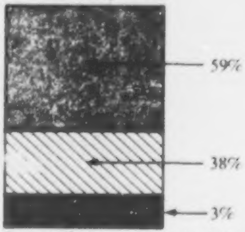
Key:
☐ Very Satisfied
▨ Satisfied
■ Dissatisfied

Auditor Appearance



No one found the auditors to be objectionable in appearance. This question was asked to help determine an acceptable dress code for auditors who must pass through both office areas and boiler rooms on the same visit. Auditors wore everything from suits to blue jeans. Casual slacks with a sport coat or blazer, to be removed as necessary, was the most popular approach.

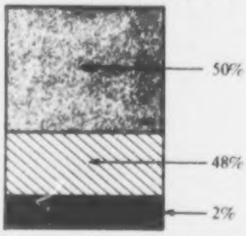
Auditor Competence



Dissatisfied customers included:

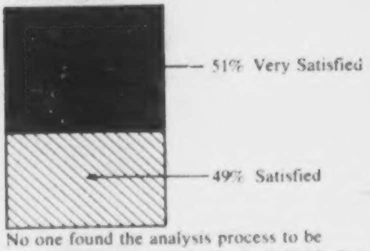
Type	Reason Given for Dissatisfaction
Office Building	Inexperienced auditor
Restaurant	Inadequate response to a rate question

Auditor's Understanding of Customer's Operation



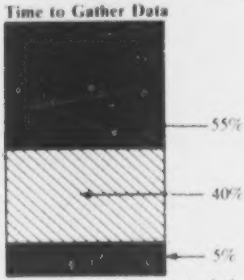
All but one customer (the restaurant manager mentioned earlier) were satisfied. This may be an indication that there was a good match between auditors' backgrounds and the level of complexity represented by the facilities they audited.

Audit Process



No one found the analysis process to be unsatisfactory. In two cases, the individuals who responded to the survey had not been present when the data-gathering was completed on their facilities; They declined to answer this question.

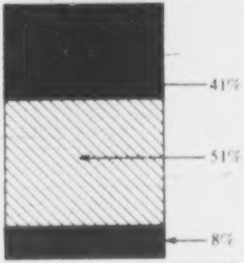
Time to Gather Data



Dissatisfied customers included:

Type	Reason Given for Dissatisfaction
Apartment Bldg.	Audit interview too brief
Bowling Alley	Data gathering took too long
Industrial Plant	Data gathering process too brief

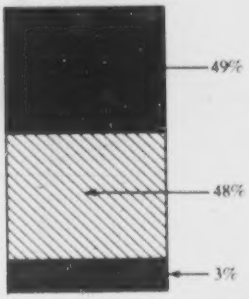
Ability of Audit to Address Customer Needs



Dissatisfied customers included:

Type	Reason Given for Dissatisfaction
Restaurant	Inadequate response to a rate question
Auto Dealership	Slow response with follow-up information
Industrial Plants (3)	Industrial processes not addressed

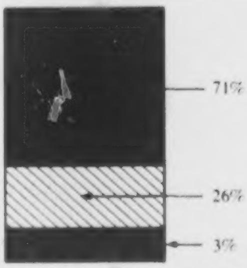
Thoroughness of Audit



Dissatisfied customers included:

Type	Reason Given for Dissatisfaction
Industrial Plants (2)	Industrial processes not addressed

Auditor's Responsiveness to Customer Concerns



Dissatisfied customers included:

Type	Reason Given for Dissatisfaction
Auto Dealership	Slow response with follow-up information
Apartment Building	Auditor did not ask enough questions

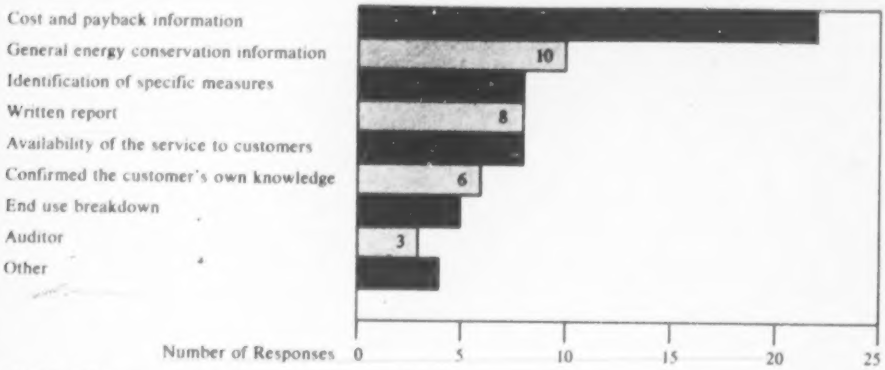
In general, most of the customers seemed satisfied with the audit and the auditor who conducted it. The major area of dissatisfaction came from the difficulty of addressing individual process energy uses in an audit of the type being tested in this pilot.

Q#9. What customers liked best about the energy audits

Examples of responses to this open-ended question included "It was free.", "Somebody was interested in us in regard to saving us money." and "It supported what I already knew."

Some responses occurred frequently enough that it was possible to break them into nine general categories. Some customers mentioned more than one favorite aspect of the audit. A few had no comment.

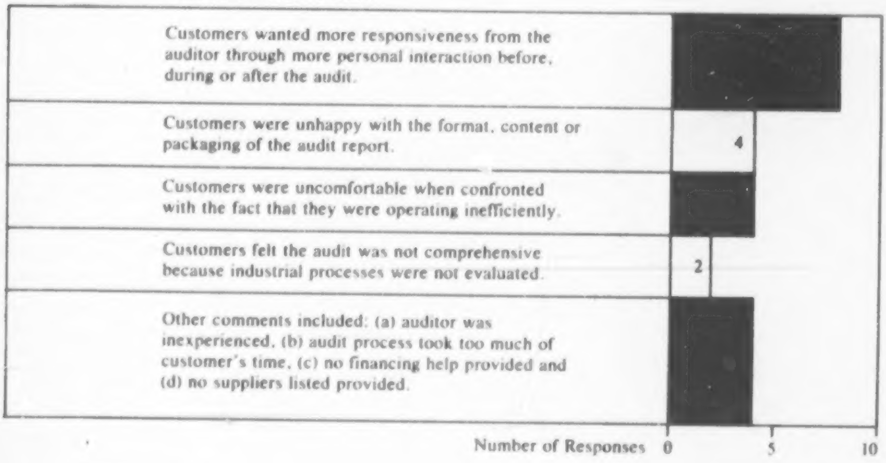
What customers liked best



Q#10. What customers liked least about the energy audits

Thirty-nine customers indicated that they did not have any least favorite part of the audit experience. The responses of the twenty-two who did comment are summarized below:

What customers liked least


Customers wanted more responsiveness from the auditor through more personal interaction before, during or after the audit.

Customers were unhappy with the format, content or packaging of the audit report.

Customers were uncomfortable when confronted with the fact that they were operating inefficiently.

Customers felt the audit was not comprehensive because industrial processes were not evaluated.

Other comments included: (a) auditor was inexperienced, (b) audit process took too much of customer's time, (c) no financing help provided and (d) no suppliers listed provided.

Q#11. Customer suggestions to improve service

Most customers surveyed (63%) declined to offer specific suggestions for improving the energy audit service. The suggestions of those who did respond are listed below.

Suggested by 3 customers

- provide post audit follow-up

Suggested by 2 customers each

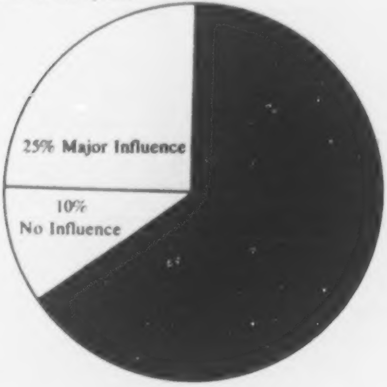
- provide list of suppliers, contractors
- give customers a clearer idea of what is expected of them during the audit
- develop industry-specific data bases
- expand audit to include industrial processes
- make audit report less technical
- provide more detailed cost or savings information
- provide more training for auditors

Suggested by 1 customer each

- make service available to those planning to build or remodel
- shorten time lag between data-gathering and delivery of report to customer
- spend more time explaining report to customer
- provide energy cost per square foot
- delete comparison to similar buildings
- package report using clear copies

Q#12. Influence of audit on customer plans to install conservation measures

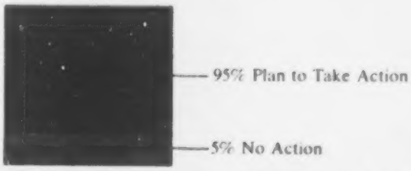
74% of the 61 respondents said that the audit had at least moderate influence on their energy conservation plans.



Customers who said the audit had no influence included:

Type	Reason Given for Lack of Influence
Apartment building	Manager had no decision-making authority.
Elderly housing	Information provided was not prescriptive enough.
Industrial plant	Building was new and energy-efficient.
Restaurant	Owner trying to sell business.
Elderly housing	Could not afford to take actions.
Office building	Owner had previously received recommendations from a heating contractor.

Q#13. & 14. Intention to install conservation measures and reasons for not installing measures



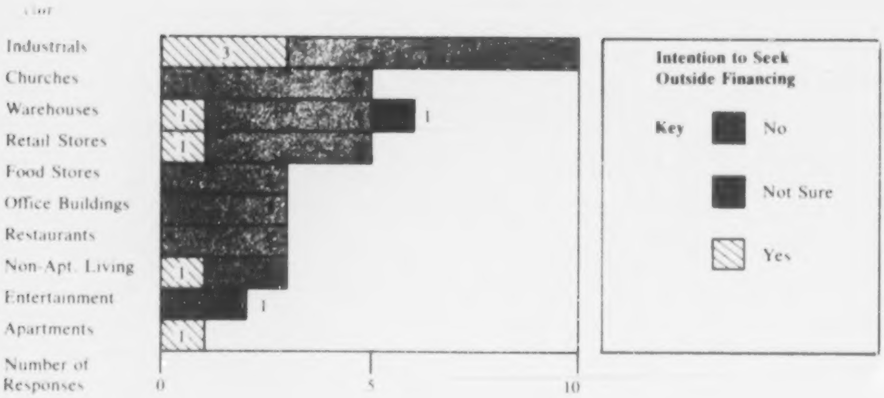
Of the customers who responded to this question, all but three plan to take at least one action. Of those three, two indicated that they could not afford to take even low cost actions and one was not in a decision-making position.

Discussion on which measures customers plan to install may be found in the section entitled "Evaluation of Conservation Potential" beginning on page 23.

Q#15. Intention to seek outside financing

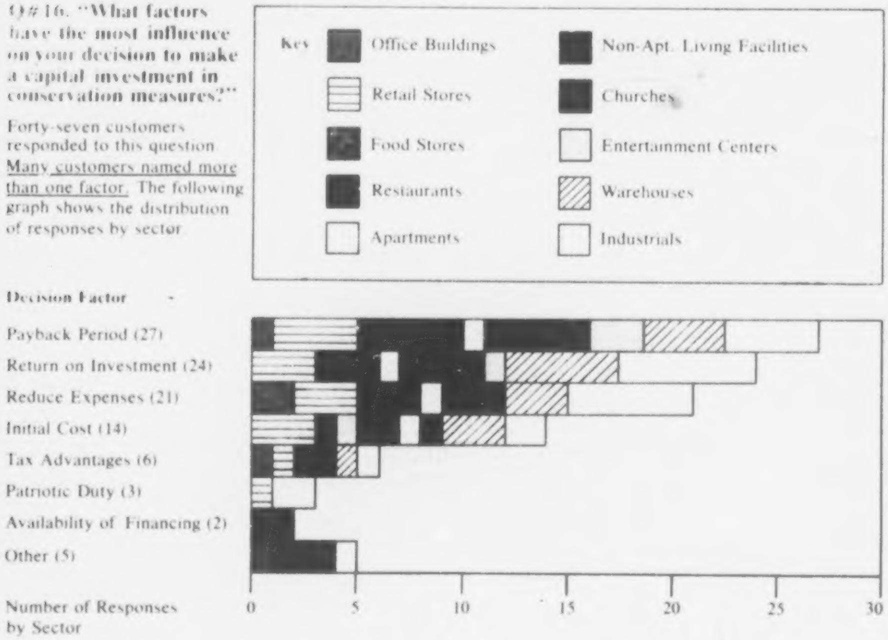
This question was asked only of those customers who indicated intentions to install measures requiring capital investment. Of the 41 customers who responded, 78% said they did not intend to seek outside financing, 17% planned to look for financing and 5% were undecided.

The following graph shows the distribution of responses by sector.



Q#16. "What factors have the most influence on your decision to make a capital investment in conservation measures?"

Forty-seven customers responded to this question. Many customers named more than one factor. The following graph shows the distribution of responses by sector.



Part III

The first two questions in Part III were designed to help gauge the value that customers placed on the energy audit they received.

Q#17. Would other businesses like yours be interested in an energy audit?

As can be seen in the figure on the right, the response was overwhelmingly "Yes." (Only two said "No").

More than one respondent went on to make a statement similar to this quote from a pharmacy operator, "They're crazy if they don't (want one)."

Q#18. Maximum value at which audit would be recommended

Customers were asked the following question: "Would you recommend this energy use analysis to business people you know if it cost . . . . .?"

. . . $500 or more
. . . $400 to $500
. . . $300 to $400
. . . $200 to $300
. . . $100 to $200
. . . Under $100
. . . Only If Free
. . . Would Not Recommend

Value of Audits

Number of Responses by Sector
Average Value of Responses by Sector

Audit Value **Sector**	**Would Not Recom.**	**Only If Free**	**Under $100**	**$100-$200**	**$200-$300**	**$300-$400**	**$400-$500**	**$500 or More**		**Weighted Average Value**
Non-Apt. Living (5)	■		■		■■			■		$275
Warehouses (6)			■	■■■	■		■			$200
Entertain. Ctrs. (4)				■■	■■					$200
Food Stores (5)		■		■■	■		■			$200
Churches (5)		■	■	■	■			■		$200
Industrials (12)		■	■■	■■■■■■	■			■■		$196
Office Buildings (6)			■■■	■■	■					$117
Retail Stores (7)		■	■■■	■■		■				$114
Apartments (5)		■	■■	■	■					$100
Restaurants (6)	■	■■	■■■							$ 30
Total per Column	2	7	16	19	10	1	2	4		
Overall Avg. Value (61)										$163
% of Total per Column	3%	12%	26%	31%	16%	2%	3%	7%		

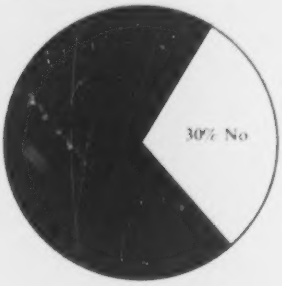
Four Main Points Stand Out When Reviewing This Graph

1. The average value at which customers would recommend an audit to others is $163.
2. The sector which placed the highest value on the audit was non-apartment living facilities at $275.
3. Restaurants placed the lowest value on the audits. All restaurants surveyed valued the audit at under $100. The average value selected by restaurant operators was only $30.
4. The most frequently found average value was $200.

The next two questions in Part III asked customers for comments about how a utility energy audit service should be financed.

The state-wide residential energy audit program (RCS) is primarily subsidized by a small surcharge on every unit of gas or electricity sold. This surcharge has proved to be generally unpopular. To assist in designing a commercial audit service financed in a more acceptable way, pilot audit recipients were polled for their opinions.

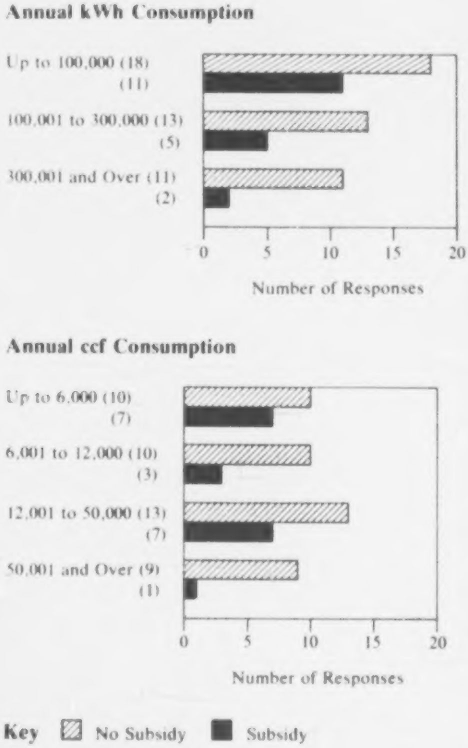
Q#19. Should energy audit recipients pay for the full cost of the service?



The survey showed that 70% of the respondents believed that customers should pay for the full cost of their energy audit. Thirty percent believed that the cost should be at least partially subsidized.

The number of responses by sector and annual energy consumption levels are shown in the following charts.

Sector	"Yes" Responses (No Subsidy)	"No" Responses (Subsidy)
Office Buildings	4	2
Retail Stores	4	3
Food Stores	4	1
Entertainment Centers	3	1
Restaurants	3	3
Apartments	3	2
Non-Apt. Living Facilities	2	2
Churches	3	2
Warehouses	5	1
Industrials	11	1
	42	18



A comparison of these responses by consumption level reveals that customers generally believe they should pay for their own audits. However, the smaller customers lean more heavily toward a partially subsidized program.

Q#20. If there is a subsidy, who should provide it?

To explore the subsidy issue a little further, forty-nine customers were asked the following question.

"If customers receiving the energy analysis service should *not* have to pay for the whole cost themselves, should:

a The customer pay part of the cost and the remainder be subsidized by all Commercial/Industrial (C&I) customers; or

b The cost be fully subsidized by all Commercial/Industrial customers; or

c The cost be fully subsidized by all customers including Residential; or

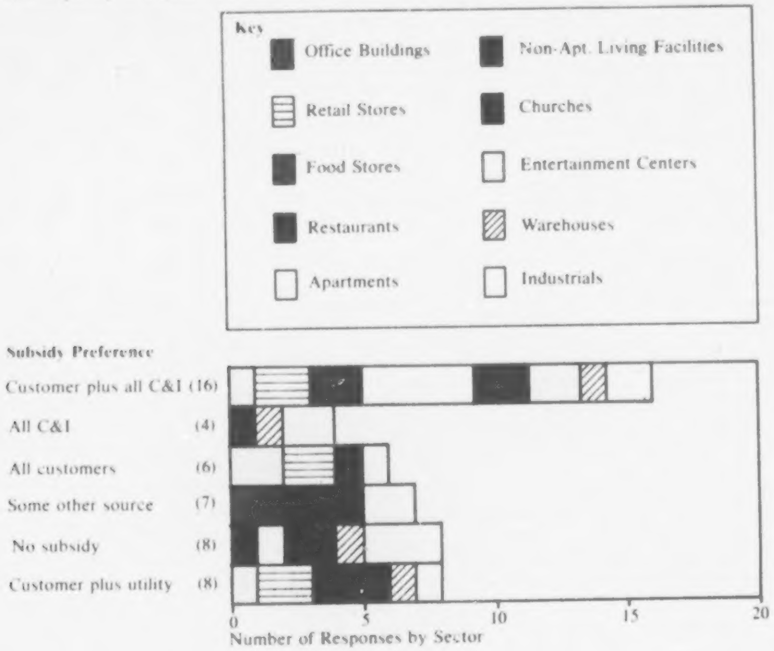
d The full cost of the energy analysis be paid by some source other than the ratepayers?"

The responses to this question were especially interesting since the respondents themselves created two options in addition to the choices given. Those options were:

e Customers were strongly opposed to a subsidy of any form and refused to select from the options given.

f Customers wanted to pay part of the cost themselves, but felt that utility shareholders should subsidize the rest.

The frequency of responses to each option and the distribution by sector are shown below.



In summary, the basic message behind all the responses to Part III seems to be:

a. Customers definitely believe that an energy audit service for Commercial and Industrial customers would be valuable.

b. Customers want to pay for the service to the extent of their ability to pay. The average value placed on the pilot audits in response to Q#18 was $163.

c. Although the majority (70%) believed that audit recipients should pay the full audit cost, only 13% of the 70% felt so strongly about it that they refused to select one of the subsidy options presented.

The customers responding to the pilot survey clearly indicated that they would like the utilities to offer an energy audit service to Commercial and Industrial customers. Although the Commercial customers seemed generally satisfied with the type of service offered in the pilot, there remains a need to investigate ways to address large process usage.

In view of the general customer sentiment against a subsidized program, it seems clear that every effort should be made to develop a self-supporting service. The development and initiation stages of that service may require at least a partial subsidy.

Q#21. Willingness to participate in a group discussion

The last question on the survey asked customers if they would be interested in participating in a group discussion regarding their energy audit and other energy issues. Forty of the 60 respondents said "Yes." This indicates a fairly high level of interest in energy related issues. Perhaps, since customers in the pilot received their audits free of charge, this might be their way of showing appreciation. Participation in a group discussion was not a condition for receiving a pilot audit.

Evaluation of Conservation Potential

The principal goal of an energy audit is to motivate customers to manage their energy use more efficiently and, as a result, to save energy. In order to develop an estimate of savings to be expected from a commercial energy audit program, the savings identified for the 73 pilot audit recipients were reviewed. The review process and the savings percentages identified are briefly described below.

During the pilot design phase, a core group of measures was established for evaluation. Each system tested was capable of providing savings estimates for a number of measures. Although there was significant overlap in the measures able to be evaluated by the different systems, each system had some unique capabilities. The total number of measures offered by the pre-packaged systems tested ranged from 16 to 66.

By combining similar measures and deleting measures inappropriate for either a standardized analysis or the Michigan climate, a list of 42 measures was developed for use in the pilot savings analysis.

Although the results of audits conducted using each system were reviewed by the pilot committee, the savings estimates reflected in this report were developed using estimates from one system. This system was selected because it addressed most of the energy conservation measures.

Evaluation Process

The process used in developing the estimated savings is briefly outlined below.

1. All calculations were made using energy savings (kWh or ccf) rather than dollar savings.
2. Measures not recommended in any of the pilot audits were excluded.
3. Savings from some measures tended to be overestimated when certain other measures were also recommended. Adjustments were made to compensate for this double-counting. In order to do this, recommended measures and savings were reviewed separately for each audit.
4. Savings percentages shown in Figures 2 and 4 are weighted averages (by audit) based on the total annual consumption of each fuel type.

Recommended Measures

Figure 1 provides a list of most of the measures that were reviewed during the pilot, ranked in order by the frequency with which they were recommended. The measures not listed include those that were deleted from the savings analysis due to consistent double-counting of savings or because they were not found to be applicable for any of the facilities participating in the pilot. Respectively, these measures were:

a. Rezone heating, ventilating and air conditioning systems
Optimal start equipment
Computerized energy management systems

and

b. Replace domestic hot water tanks
Replace high output with standard fluorescents
Reflective window film
Moveable night insulation
Floor insulation
Cooking ventilation improvements.

Although the measures most frequently recommended tend to provide short term payback, a careful review of Figure 1 reveals that the inverse can not be assumed to be true. Measures which are not widely applicable can offer very attractive payback in certain situations.

For example, heat recovery from refrigeration equipment was only recommended six times during the pilot. For those audits in which it was recommended, heat recovery proved to be a very cost-effective measure (returning $1,000 on average annually for an initial average investment of $2,400).

Conversely, some of the more frequently recommended measures may provide limited overall savings. Reducing the temperature of hot water used for hand washing is one example of this.

The measures shown in both Figures 1 and 2 are intended to provide insight regarding the types of actions that can be cost-effective for Commercial and Industrial customers. The lists are representative, but certainly not all inclusive. Facilities must be reviewed, and measures recommended, on a case by case basis.

Figure 1

Summary of Findings on Recommended Measures

(Based on 73 Audits)

Recommended Measures Used in Savings Analysis	Number of Times Recommended	Average Payback in Years*	Estimated First Year kWh Savings	Estimated First Year ccf Savings
Lighting: Relamp fluorescents	57	1.7	349,620	0
Heating: Temperature setback	56	.5	168,147	329,416
Heating Equipment: Extinguish pilot	34	2.6	766	2,592
Heating: Temperature reduction	33	.09	112,970	106,548
Cooling Equipment: Maintain	32	2.1	92,079	0
Insulation: Tank	30	1.4	15,037	11,539
Lighting: Reduce light levels	28	.7	191,884	0
Weatherstripping/caulking	28	4.1	47,041	10,358
Cooling: Temperature increase	26	.05	79,488	0
Domestic Hot Water: Reduce temperature	21	0	2,861	1,540
Lighting: Reduce operating time	18	.2	105,962	0
Heating Equipment: Tune/maintain	18	.2	774	60,369
Insulation: Roof/ceiling	17	7.1	30,934	21,929
Domestic Hot Water: Reduce water flow	17	1.1	1,660	15,631
Cooling: Temperature set forward and air-conditioning shut-off	14	.06	24,859	0
Destratification fans	12	2.3	28	15,415
Heating Equipment: Install stack damper	11	3.8	99	4,670
Heating Equipment: Replace	11	5.4	97	56,965
Storm/thermal windows	10	6.0	54,906	4,294
Plastic storm windows	9	3.6	45	8,870
Replace/repair window or door	9	0	115	12 960
Insulation: Wall	9	13.4	6,110	18,418
Air Compressors: Maintain/adjust	9	0	52,626	0
Refrigeration Equipment: Maintain/adjust	8	.9	2,181	0
Lighting: Replace incandescent with fluorescent or high pressure sodium	7	3.7	1,688	0
Add additional glazing (window wall)	7	10.0	7,742	12,762
Insulation: Pipe and duct	7	10.5	67	2,620
Efficient cooking procedures	7	0	15,357	2,263
Dishwashing improvements	7	0	280	0
Heating Equipment: Install turbulators	6	3.7	343	5,270
Heating Equipment: Hot water reset	6	2.5	0	8,531
Refrigeration Equipment: Heat recovery	6	2.4	141,607	2,598
Domestic Hot Water: Cycle circulation pump	6	.6	14,764	67
Reduce window area	5	15.4	33	16,469
Ventilation Reduction: Fan time	3	.07	78,130	14,794
Refrigeration Equipment: Add barriers	3	6.4	92,966	0
Steam System: Maintain	3	4.3	364	3,430
Heating Equipment: Install new burner	3	4.0	0	2,461
Ventilation Reduction: Outside air	3	.08	244	23,019
Add storm doors	2	6.4	617	74
Cooling Equipment: Economizer	2	8.8	17,767	0
Lighting: Refixture	2	6.7	38,744	0
Total	602	2.1	1,751,002	775,872

*Payback of "0" indicates potential for immediate recovery of implementation costs.

Recommended Measures by Sector

The total savings for all recommended measures as adjusted and weighted by total usage for each audit was 21.8%. This savings was based on a total annual natural gas consumption of 3,228,428 ccf and a total annual electric consumption of 27,359,063 kWh. Figure 2 shows the estimated annual savings by sector and the measures most frequently recommended for each sector.

It should be noted that the low level of savings identified for the Industrial customers was not caused so much by a lack of savings available in that sector as by the large amount of energy consumed in that sector for process uses which were not addressed in the pilot.

Figure 2
Summary of Findings on Recommended Measures by Sector

(Based on 73 Audits)

Sector	Total Number of Recommendations	Estimated First Year kWh Savings	kWh Savings as a Percent of Total Annual Usage	Estimated First Year ccf Savings	ccf Savings as a Percent of Total Annual Usage	Measures Most Frequently Recommended*
Office Buildings	49	62,972	10.5%	14,312	22.8%	Relamp fluorescent lights Heating temperature setback Reduce light levels Increase cooling temperature Reduce heating temperature
Apartments	40	29,631	4.8%	99,801	36.5%	Tune/maintain heating equipment Reduce domestic hot water temperature Reduce heating temperature Replace/repair window or door
Retail Stores	52	187,814	19.4%	18,195	44.8%	Heating temperature setback Relamp fluorescent lights Reduce heating temperature Temperature set forward & air conditioning shut-off
Food Stores	63	342,385	16.9%	17,529	40.4%	Relamp fluorescent lights Heating temperature setback Maintain cooling equipment Maintain/adjust refrigeration equipment
Entertainment Centers	47	145,563	13.1%	68,90[illegible]	55.7%	Increase cooling temperature Maintain cooling equipment Tune/maintain heating equipment Reduce heating temperature Relamp fluorescent lights

*Savings shown are for all recommended measures, not just for these measures.

Figure 2 (Continued)

Sector	Total Number of Recommendations	Estimated First Year kWh Savings	kWh Savings as a Percent of Total Annual Usage	Estimated First Year ccf Savings	ccf Savings as a Percent of Total Annual Usage	Measures Most Frequently Recommended*
Restaurants	60	71,382	6.6%	19,343	22.5%	Heating temperature setback Maintain cooling equipment Roof/ceiling insulation Relamp fluorescent lights Efficient cooking procedures Dishwashing improvements
Non-Apt. Living Facilities	59	440,432	19.9%	56,839	20.6%	Heating temperature setback Reduce domestic hot water flow Weatherstripping/caulking Reduce heating temperature Relamp fluorescent lights Replace incandescent with fluorescent lights
Churches	45	24,715	9.5%	35,775	42.6%	Extinguish pilot lights Relamp fluorescent lights Destratification fans Reduce heating temperature Heating temperature setback Reduce light levels
Warehouses	61	166,478	7.9%	108,646	27.1%	Relamp fluorescent lights Heating temperature setback Extinguish pilot lights Reduce operating time of lights Reduce domestic hot water temperature Reduce heating temperature
Sub-total Commercial Sectors	476	1,471,372	13.3%	439,344	31.6%	
Industrials	126	279,630	1.7%	336,528	15.8%	Relamp fluorescent lights Heating temperature setback Tank insulation Weatherstripping/caulking Extinguish pilot lights Maintain/adjust air compressors Reduce domestic hot water flow
Total	602	1,751,002	6.3%	775,872	21.8%	

*Savings shown are for all recommended measures, not just for these measures.

Planned Installations

Identifying the maximum energy savings potential for customers is only a first step in a successful energy audit service. The critical ingredient is, "What actions will customers take after receiving the audit results?"

The only way to make this evaluation of customer installations within the pilot time frame, was to ask the audited customers what actions they planned to take. This was done as part of the customer survey described earlier.

Of the more than 600 energy conservation opportunities identified in the pilot, the customers who responded to the survey (84% of those audited) were planning to install 144 measures within the next 12 months.

Figure 3 lists the 24 different types of measures for which installations are planned, in order by length of estimated payback period.

Figure 3
Summary of Installations Planned by Customers
(Based on 61 Surveyed Customers)

Measures to be Installed	Average Payback in Years*	Number of Installations Planned
Replace/repair window or door	0	1
Domestic hot water: reduce temperature	0	9
Heating: Temperature reduction	.1	9
Lighting: Reduce operating time	.2	7
Cooling: Temperature increase	.2	5
Heating Equipment: Tune/maintain	.3	6
Lighting: Reduce light levels	.8	10
Refrigeration Equipment: Add barriers	1.5	2
Heating: Temperature setback	1.6	7
Weatherstripping/caulking	1.7	12
Lighting: Relamp fluorescents	1.8	22
Cooling Equipment: Maintain	1.8	5
Insulation: Tank	2.1	10
Refrigeration Equipment: Heat recovery	2.3	1
Heating Equipment: Extinguish pilot	2.5	16
Domestic Hot Water: Reduce flow	2.7	1
Destratification Fans	2.8	4
Heating Equipment: Install stack damper	3.3	2
Insulation: Roof/ceiling	4.5	6
Heating Equipment: Replace	5.6	3
Lighting: Replace incandescent with high pressure sodium	6.4	1
Insulation: Pipe and duct	8.4	2
Insulation: Wall	11.4	2
Rezone heating, ventilating and air-conditioning systems	not available	1
Total	1.4	144

*Payback of "0" indicates potential for immediate recovery of implementation costs.

Each planned installation was matched to the appropriate savings and cost estimates from the measures recommended for that facility. Savings estimates were then calculated for each measure (for each audit) and totaled by sector and for all surveyed customers.

The annual consumption of the non-surveyed customers was removed from the sector totals when calculating the percent savings for the installed measures. Some customers reported plans to install measures which were not recommended as the result of a pilot audit. These responses were not included in any calculation.

The estimated savings for all of the surveyed customers minus the Industrial customers was 4.14% of an electric consumption of 8,491,262 kWh and 9.05% of an annual natural gas consumption of 1,002,523 ccf. Including the industrial sector brings the savings down to 2.15% (of 17,387,154 kWh) and 5.98% (of 1,847,661 ccf).

Figures 4 shows the distribution of savings by sector.

Figure 4

Summary of Findings on Installations Planned by Customers

(Based on 61 Surveyed Customers)

Sector	Estimated First Year kWh Savings	kWh Savings as a Percent of Annual Usage	Estimated First Year ccf Savings	ccf Savings as a Percent of Annual Usage	Measures Most Frequently Chosen for Installation*
Office Buildings (6)	18,564	4.5%	3,530	8.8%	Reduce light levels Relamp fluorescent lights
Apartments (5)	11,385	3.6%	42,119	21.8%	Reduce operating time of lights Reduce light levels Reduce temperature of domestic hot water Replace/repair window or door
Retail Stores (7)	125,447	13.1%	1,567	4.1%	Relamp fluorescent lights Reduce light levels Reduce heating temperature
Food Stores (5)	19,282	2.1%	2,954	16.9%	Relamp fluorescent lights Tank insulation Weatherstripping/caulking
Entertainment Centers (4)	27,673	2.5%	13,385	12.7%	Reduce light levels Relamp fluorescent lights
Restaurants (6)	14,731	1.5%	6,872	9.1%	Maintain cooling equipment Relamp fluorescent lights
Non-Apartment Living Facilities (5)	104,468	5.4%	2,061	1.0%	Reduce temperature of domestic hot water Reduce heating temperature Heating temperature setback
Churches (5)	3,892	1.7%	4,218	6.8%	Extinguish pilot lights Weatherstripping/caulking Destratification fans Reduce heating temperature
Warehouses (6)	29,688	1.8%	18,311	6.4%	Heating temperature setback Extinguish pilot lights Weatherstripping/caulking Relamp fluorescent lights
Sub-total Commercial (49)	355,130	4.1%	95,017	9.1%	
Industrials (12)	22,264	.3%	20,499	2.[illegible]%	Extinguish pilot lights Relamp fluorescent lights Weatherstripping/caulking Reduce temperature of domestic hot water
Total (61)	377,394	2.2%	115,516	6.0%	

*Savings shown are for all planned installations, not just for these measures.

Comparison of Estimated Savings from Recommended Measures to Savings Estimates for Planned Installations

In order to compare savings estimates from the recommended measures to those from planned installations reported by the surveyed customers, the "percent savings estimates" from each were applied against the same base annual usage.

Figure 5 illustrates the numbers derived by multiplying the electric savings percentages shown in Figures 2 and 4 by the actual annual kWh consumption of all pilot audit recipients. Non-apartment living facilities and food stores appear to have the greatest opportunity for electric savings. However, retail stores and apartment buildings seem to be most willing or able to implement electric savings measures recommended to them.

Figure 5

Estimated Electric Savings

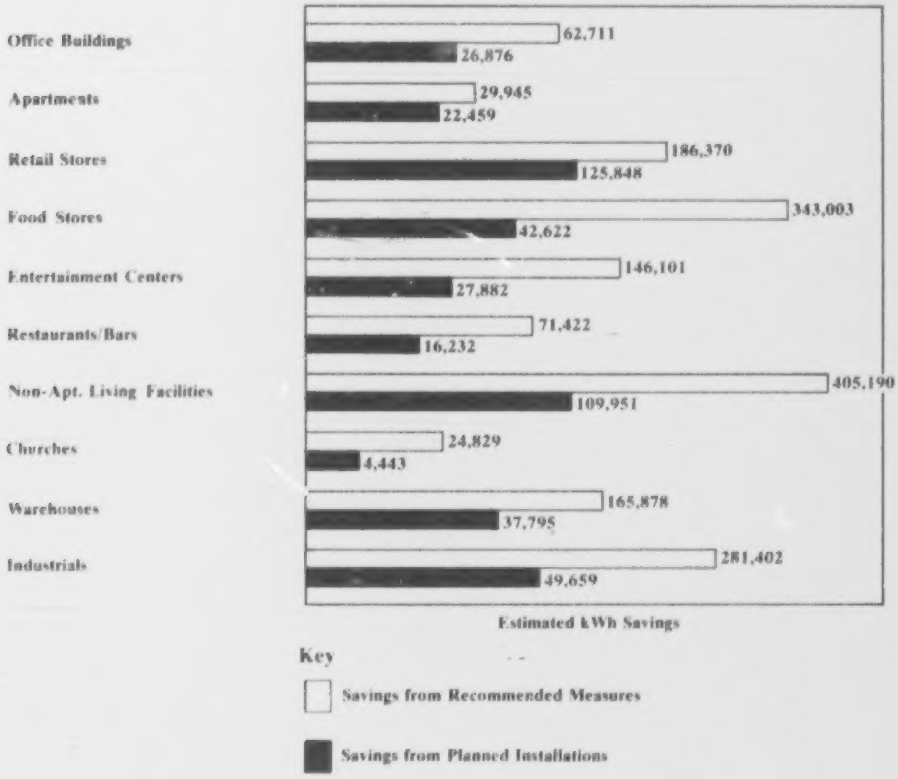
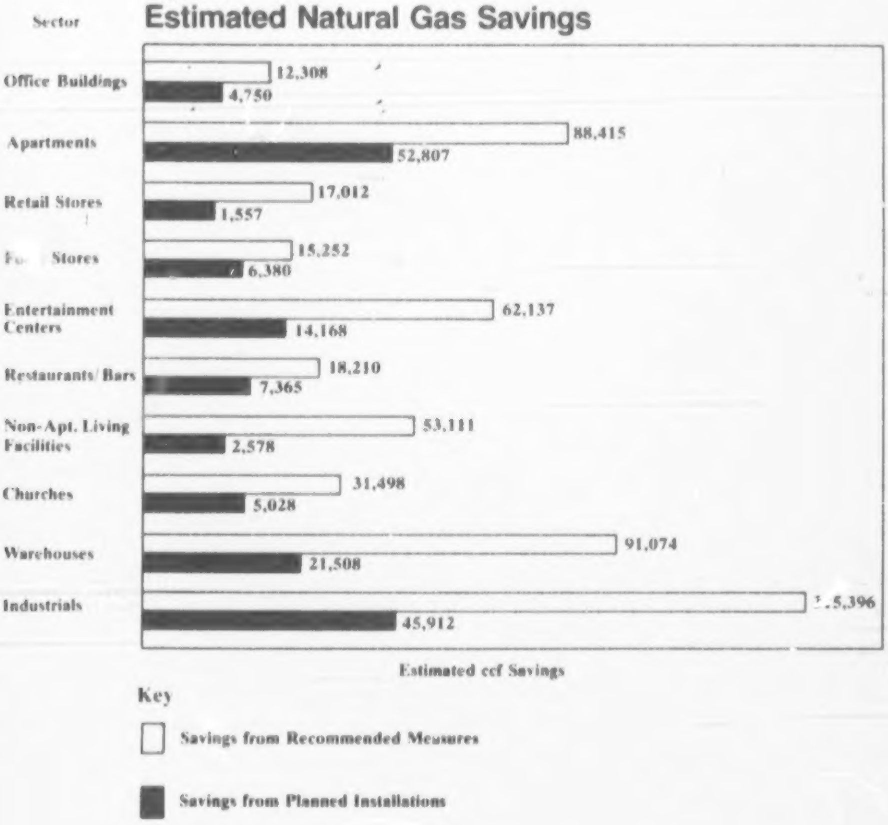


Figure 6 illustrates the numbers derived by multiplying the natural gas savings percentages shown in Figures 2 and 4 by the actual consumption of the seventy pilot audit recipients who were natural gas customers. Industrial customers have the largest gas savings potential, even though the savings estimates do not include any savings in process gas use. The potential savings identified for apartments, food stores, restaurants and office buildings do not approach the total savings possible from Industrial customers. However, those four sectors seem particularly interested in natural gas savings since they have indicated plans to install measures to save up to 60%, 42%, 41% and 39% respectively, of the possible savings identified for them in their audits.

Figure 6

Estimated Natural Gas Savings



Summary - Evaluation of Conservation Potential

Savings from Recommended Measures

Average natural gas savings available from measures recommended in pilot audits is 21.8%. Average electric savings is 6.3%. These savings estimates are artificially low due to the large gas and electric process use which was not addressed for Industrial customers. Therefore, savings percentages based on the pilot experience with the nine non-industrial sectors may be more realistic.

Excluding the savings and usage of the industrial sector yields an estimated 31.6% natural gas savings and 13.3% potential electric savings for Commercial customers.

Combined gas and electric (Btu)* savings possible from implementation of all measures recommended in the pilot audits is approximately 18.3%[1].

Savings from Planned Installations

Average natural gas savings available from installations planned by all surveyed customers is 5.98%. Average electric savings is 2.15%. The estimated savings percentages for Commercial customers only are 9.05% and 4.14% respectively.

Combined gas and electric (Btu) savings possible if all surveyed customers actually install all the measures indicated is approximately 4%.

---

*Btu (British thermal unit): The standard unit for measuring quantities of heat energy.

[1] Data accumulated during the pilot was quantified and evaluated from various perspectives in order to gain the maximum insight from the experience. Some of this information is dispersed throughout this report to help illustrate and explain pilot results. However, the reader should be aware that all pilot results are qualitative in nature. Although the customers audited in this pilot represent a reasonable diversity of the commercial/industrial population in Michigan, they do not constitute a statistically representative sample.

Conclusions

At the outset, it was agreed by all parties to try to gather as much information as possible regarding each of the several pilot objectives. What follows is a brief discussion of conclusions reached regarding each of the objectives identified earlier in this report.

Program Design

The Residential Conservation Services program is a ratepayer-subsidized program which allows a Residential customer to receive basically the same audit no matter which utility company provides the service. This approach has worked quite well for the relatively homogeneous residential structures.

Although a similar program could be developed for Commercial customers, there is reason to believe that it would not be the most effective option. In the first place, non-residential customers are an extremely diverse group. The best approach to designing an energy audit service for Commercial customers might well be to create modules by sector. In this way companies would offer church audits, restaurant audits, grocery store audits, nursing home audits, laundromat audits, office building audits, health spa audits, warehouse audits and so on. Each company would have to give priority to certain types of audits depending on the customer mix in its service area. Developing an audit service which can address energy usage in such a wide diversity of business types represents a real challenge for the utilities.

From the customer's perspective, it seems that the time has come for utility-sponsored commercial and industrial energy audit services. Given the assurance of reasonable cost recovery, utility companies can now take the initiative in developing commercial energy audit services. The introduction of a prescriptive statewide commercial conservation services program at this time could very well have a deterring rather than an enhancing effect on the quality of services made available to customers. Michigan utility companies should be given the opportunity to develop their own Commercial and Industrial Energy Audit Services.

If utility companies charge customers for the service (as the majority of customers surveyed would prefer), there is the potential that these services could be largely if not entirely, self-supporting.

Feasibility and Value

"A system-wide commercial audit program would be feasible for Detroit Edison."

Detroit Edison

"It is reasonable to believe that several thousand audits could be conducted annually within the Consumers Power Company's service area with significant resource commitment."

Consumers Power Company

"At this time, we are confident a program can be designed to meet almost all criteria established by regulations, utilizing computer or software firms. We feel, however, there are some limitations which should be addressed in a full scale program."

Michigan Gas Utilities Company

These three statements, taken from company summaries, indicate clearly that it is feasible for these companies to offer a commercial audit service to their customers. Given adequate financing, utility companies with existing energy management personnel could initiate such a service within the near future.

The rapidly improving state-of-the-art of computerized audit processing, while not necessary for a commercial audit service, could significantly minimize the cost of offering such a service on a large scale basis.

Customer reaction throughout the pilot was consistently positive. The great majority of those invited to participate in the pilot were willing and eager to do so. A resounding 97% of the customers interviewed after receiving their audits believed that other members of their industry would be interested in receiving an energy audit. Customers also indicated a willingness and even a preference to pay for the service. It is interesting to note that "the grapevine" is already spreading the word. Customers, who assume that a commercial audit service is currently in place, have begun contacting the companies for audits. There appears to be little doubt that customers are interested in a commercial energy audit service.

Cost Justification

Based on a weighted average of the pilot survey responses, non-residential gas and electric customers would recommend audits to others if the service cost $163. Estimates based on experiences in this pilot indicate that it should be possible for the utility companies to develop a service that would be attractive to Commercial and Industrial customers.

The average annual energy bill for the fifty-seven Commercial customers included in the pilot was approximately $20,000. Pilot audits suggest that the average Commercial customer has a potential for annual gas savings of $3,100 and annual electric savings of $1,300. These dollar savings represent approximately 22%* of the average annual energy cost. If these savings can be realized, the impetus for developing a program to elicit these dollar and energy savings becomes apparent.

The energy savings potential identified in this pilot offers only a rough estimate of what should happen with a full scale service offering. Notwithstanding that fact, all parties in this pilot are in agreement that it is time for Michigan utilities to move quickly ahead with the development of energy conservation services for their Commercial and Industrial customers.

Staffing Requirements

Skill Level

In the early pilot planning stages, the general assumption was that "RCS" auditors would not have the technical capability to perform commercial and industrial audits. This has proven to be generally true for larger Commercial and Industrial customers and generally false for smaller customers.

Quotations from each of three companies reveal their opinions on staffing needs.

Michigan Gas Utilities Company:

"Based upon the experience of performing audits of varying complexity, it appears that three levels of auditor expertise may be required. One level would be the non-technical level where the audit is fairly straightforward and could likely be performed by a person with RCS training and experience. The second level of sophistication would be the person with RCS training and experience plus additional technical training in energy systems. The third level of expertise would require a professional engineer with a wide range of experience with energy systems."

Consumers Power Company:

"Our auditors were enthusiastic about the pilot program and welcome the opportunity to service customers in the area of conservation. Auditors were selected from our Energy Management Services Department and have good general technical as well as customer service background. As a result of performing the audits, we have concluded that in-depth training should be provided in heating, ventilating and air-conditioning systems, lighting and process heat recovery because these are the areas where the greatest energy conservation potential exists.

In addition to technical skills, we feel marketing skills are equally important because it is up to the auditor to "sell" the conservation measures, beyond low cost, no cost items. In the final analysis, it's how much energy is saved, not how many audits are conducted. Clearly, auditors hold the key to the success of a state-wide commercial and industrial audit program and should receive adequate training, both technical and marketing, before any commercial and industrial audit program could begin."

Detroit Edison:

"The auditing work force was comprised of professional, senior and junior engineers together with two residential conservation service auditors and senior energy technicians. Once the computer logic is in place, the qualifications required of the auditor are understanding basic heat loss/heat gain applications, developing the basic knowledge of heating, ventilation and air conditioning systems and the ability to effectively communicate the audit results in both technical and non-technical terms to the customer.

In the pilot study, more than 95% of the audits could have been performed by a trained senior RCS auditor. Training of an RCS auditor without the basic knowledge of heating, ventilating and air-conditioning concepts would require approximately two weeks.

---

*This figure is an average dollar savings for the "average" pilot Commercial customer. It is unrelated to other (energy) savings estimates discussed throughout this report.

Where there is a large amount of energy consumed for process heating, this task should be accomplished by a Professional Engineer.''

Hours per Audit

Pilot field experiences indicate that the audits, on average, take eight hours to complete. However, some audits can take as much as two days and some as little as two hours.

Who Should be Eligible?

There is consistent opinion among the participating utilities that a full scope program should be available to all Commercial and Industrial customers. In designing a service or services to provide energy audits to these customers, there may be numerous options. Each company's size and existing capabilities may help determine which approach is best for them.

Conservation Measures

The most frequently recommended measures were group relamping of fluorescent fixtures and heating temperature setback. Customer survey responses revealed that although a large number of customers plan to act on the relamping recommendations, relatively few plan to implement temperature setback.

Descriptions of various conservation measures are included as an appendix at the end of this report.

Inter-Company Coordination

During the pilot, inter-company coordination abilities were utilized in several ways. First was the obvious cooperation needed in designing and implementing a joint project. Second, with the customer's approval, consumption histories were exchanged between electric and gas companies serving the same customer. This appeared to work quite smoothly and allowed for the use of actual rather than estimated consumption data in savings estimates. In a larger scale audit program, perhaps a system could be set up to allow for exchange of this kind of information as a service to customers who would prefer not to be bothered producing their own records.

Another concept tested in the pilot was using a team approach when auditing larger customers. These teams consisted of an auditor with an electric background (from Detroit Edison or Consumers Power) and one more knowledgeable about natural gas systems (from Michigan Gas Utilities or Consumers Power). The original idea was to provide a learning experience for each auditor/company regarding systems operating on the opposite energy type. What actually happened in many cases was that the team split up and each auditor gathered information relating to his/her own specialty.

It is not being proposed that two-company teams conduct audits on a regular basis. However, it is recognized that utilities will cooperate to the fullest extent for the benefit of the customer. Examples of beneficial cooperation might include regular information exchange and cross-company consultation. In addition, companies might want to consider a (same company) team approach for larger buildings since this kept the time on a customer's premises to a minimum.

Develop/Test Methodologies

Two basic approaches to energy accounting were reviewed and tested during the pilot. The most common method found was mathematical modeling using The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards to calculate heat loss/gain for the building, etc. Also reviewed was a technique which compared data from each audit with a historical data base of audits on similar buildings to arrive at heat loss/heat gain information.

Michigan Gas Utilities Company had this to say about the various systems tested.

''Though all systems are more or less capable of doing commercial and industrial audits, the systems ultimately used should have the best characteristics of all four. There should be flexibility in the system to allow for varying degrees of audit sophistication depending upon the complexity of the audit. This would require that the system selected be flexible enough to perform relatively simple audits with few measures or complex audits with many and varied measures. Ideally, this system would allow the auditor to input, and the computer to calculate for, only those items which are applicable to the audit situation thus helping to ensure the cost-effectiveness of the audit.''

Regardless of the methodology used, the two most difficult areas to deal with were (a) accurately allocating end use of current energy consumption and (b) deriving a reasonable cumulative savings estimate which adjusted for overcounting of savings when several measures were recommended. These two areas are simultaneously the weak points of some of the computerized systems and the strong points of the manually calculated audits. Obviously, no system can produce reliable results unless input data is accurately collected and correctly used.

Customer Investment Decision Needs

To an Industrial or Commercial customer, the decision to install energy conservation measures is based on a comparison of investment required with potential savings. In other words, "Will the savings from installing the conservation measure reduce expenses enough to cover the investment necessary to support the measure?"

For this reason, Commercial and Industrial customers are very interested in seeing the estimated dollar savings and costs of installing or implementing measures recommended by the audit process. In some areas accurate contractor cost estimates can be difficult to obtain. Nevertheless, they are a necessary component in the audit results. Without them, customers may not be motivated to proceed with the implementation of measures.

According to survey responses, almost as many customers base investment decisions on simple payback as rely on more sophisticated life cycle cost analyses. Some customers refer to both in making decisions.

Utility companies preferring to offer only simple payback estimates in their audit reports may find their larger customers disappointed in this. On the other hand, some smaller customers seemed a bit overwhelmed by one report type which provided a one-page financial analysis for each major recommended measure. Perhaps a two-tiered approach could be developed once a clear trend of customer preference could be determined. Any method of economic analysis used should be consistent with accepted accounting principles.

Report Preference

On-site

On-site processing of audit results provides a nice touch of showmanship for those customers who have the time to observe. However, systems that require tying up a customer's telephone line do not appear to be workable. Another problem with on-site audits is arranging adequate set up space.

An "on-site" report generally consists of several pages of computer printout perforated into eleven-inch sheets. These thermal printed sheets of paper are inserted into a prepared notebook which contains several pages of description about energy conservation measures. These reports gain credibility if measure descriptions are included only for measures specific to a customer (as opposed to a standard package dealing with all measures that system is capable of evaluating).

The best application for "on-site" reports is for small retail and commercial establishments with a single temperature zone.

Off-site

In general, commercial and industrial energy audits are complicated enough to warrant off-site evaluation of customer data before returning with a written report. This approach is recommended because it allows auditors, with or without computer assistance, time to more prescriptively analyze facilities. Evaluations can be made on multiple temperature zones, lighting types, heating/cooling systems and heat recovery opportunities. These reports are more "custom tailored" to individual audit recipients. Disadvantages to this approach include additional customer disruption due to (one or more) return visits and extra expense due to prolonged auditor involvement.

Customer Information Materials

The best way to handle customer information in the context of an energy audit would be to incorporate customer-specific information into the body of the audit report. While this can be done to some extent, probably the most practical approach would be to have prepared customer materials by business type (churches and restaurants received these in the pilot).

Brochures could also be prepared by measure type, especially for less easily understood applications such as heat recovery modifications.

Load Management Opportunities

Load management was addressed in the pilot through evaluation of potential savings from installation of computerized energy management control systems. Generally, these are only worthwhile for larger customers. Manual limiting of electric demand was also discussed with customers. An example of this would be advising restaurants with multiple ovens to stagger turn-on time and only use those that are necessary.

Significant dollar savings to customers are possible through maximizing the efficient use of their energy consuming systems. These dollar savings, however, do not necessarily correspond to energy savings.

The question of whether load management is most appropriately dealt with in the context of an energy audit was not answered in this pilot. Regardless of whether or not load management options are formally evaluated during a commercial energy audit, auditors should be conversant on the subject.

Contractor Referral

A large scale utility commercial energy audit service has the potential to increase business for private consultants and contractors in three ways.

1. It should serve to increase general awareness of savings opportunities from modifications to building shells and energy-using systems. Business managers may become more receptive to manufacturers, suppliers and installers of energy-related devices.
2. Customers may seek second opinions, more detailed evaluations and other technical advice before spending capital dollars. Utility auditors, in fact, will strongly advise customers to contact local consultants, suppliers and/or contractors.
3. There are some customers who will prefer to seek an energy audit from a private firm. Utility promotion of energy audit services could motivate these customers to proceed with an investigation of energy use through the consultant of their choice.

It is possible that utility companies could facilitate the positive impact on local businesses by making available lists of various private consultants for distribution to customers on request. Due to the time and expense involved in maintaining such a list, utilities should determine for themselves whether this service should be offered to their customers. However, other options may be available, and should be explored, to help ensure that utility energy audit services tend to spur the economy rather than harm it.

Summary

The major conclusions of this pilot study are:

1. Assuming adequate financing and sufficient lead time, it is feasible for Michigan's utility companies to offer energy audit services to their Commercial and Industrial customers.

2. Commercial and Industrial customers will welcome the availability of such a service.

3. Commercial and Industrial customers, in general, wish to pay for services received.

4. There is good potential for energy and dollar savings for these customer classes.

5. The majority of energy audits for these customers could be conducted by non-engineers with appropriate training.

6. Eligibility for energy audit services should be extended to all Commercial and Industrial customers. Some phasing in by rate class or size may be necessary during developmental stages.

7. The measures found to be most appropriate for existing commercial and industrial facilities in Michigan can be placed into ten general categories:

   - Thermostat setback/setup
   - Lighting
   - Building envelope
   - Heating equipment improvements
   - Proper maintenance of all systems
   - Domestic hot water system improvements
   - Pipe and duct insulation
   - Heat recovery
   - Cooking/dishwashing improvements
   - Cooling and ventilation improvements

   Renewable resource measures, with the exception of some window treatments to reduce air conditioning loads, do not seem to offer sufficient payback to be given priority in an energy audit service at this time.

   Both industrial process use and commercial/industrial cogeneration potential were beyond the scope of this pilot.

8. All pilot participants agree that a system which incorporates expert judgment and experience with computerized calculation and report writing should produce the most reliable and cost effective service within the scope defined.

9. Commercial and Industrial customers will not invest in energy conservation measures on the basis of generalized information. Specific cost and payback estimates are required to stimulate action. Many customers refer to life cycle cost analyses during the decision making process. However, pilot field experience indicates that those measures which provide a simple payback in three years or less are most likely to be immediately implemented.

10. An audit report should be packaged in a professional manner and, to the greatest extent possible, be customer-specific in its recommendations. Time spent before the audit explaining the audit process, as well as a post-audit session in which the auditor explains the report to the customer, should do much to ensure customer satisfaction.

11. Utility energy audit services should stimulate customer interest in cost control through energy management and, therefore, increase utilization of private services to design, install and maintain energy efficient systems and facilities.

Appendix

Energy Conservation Measures

The following section contains a brief description of several of the measures which were evaluated in the pilot study. Before implementing these or any other energy conservation measures, building operators should verify that no public health, safety, energy or building code would be violated by installation of a measure.

Domestic Hot Water Heating

Commercial hot water systems frequently require hot water for short periods of heavy use at various locations within a building. In the pilot, three measures were suggested to aid in reducing the use of energy for heating water.

Reduce Hot Water Temperature (Domestic Hot Water: Reduce Temperature)

Lowering the temperature of domestic hot water to 120°F, where possible, can save a considerable amount of energy. When this low temperature is not appropriate for all domestic hot water usage, a booster heater may be installed to raise water temperature for kitchens, laundries, and other processes requiring higher temperatures. The magnitude of the energy saved depends on the amount of temperature reduction, the ambient temperature of the tank location, the usage rate of the hot water and the R-value of the tank insulation.

Reduction in Hot Water Circulation Pump Operation (Domestic Hot Water: Cycle Circulation Pump)

It is not economical to keep a domestic hot water system operating during unoccupied periods. Energy can be saved by manually shutting down the system or connecting the circulating pump to a time clock so that the system does not operate during unoccupied periods. The resulting savings from this measure will depend on the size of the piping system, the temperature of the water, the ambient temperature and the size of the pump.

Flow Reduction in Faucets and Shower Heads (Domestic Hot Water: Reduce Water Flow)

Installing flow reduction devices is one of the most cost-effective ways of reducing consumption of hot water. Faucet aerators and low-flow shower heads can cut water flow 30 to 50 percent with no impact on normal uses.

Lighting

Lighting makes up a major portion of the total electrical consumption of most Commercial customers. Offices and retail stores are among the heaviest users of electric energy for lighting, due to its direct effect on productivity and sales. Lighting is a major source of internal heat gain; it both increases the cooling load of a building and decreases the heating load. Therefore, inefficient use of the lighting system can be very costly both directly and indirectly. The following measures provide means for reducing inefficient use of lighting.

Reduced Hours of Operation (Lighting: Reduce Operating Time)

Manual switching of unnecessary lighting, if possible, is always a cost cutting measure. This can be accomplished by encouraging employees to be energy conscious, modifying company policies and practices, and by assigning responsibility to individual employees. In many cases, the lighting system was installed when the availability of low cost energy made the initial equipment cost the prime consideration of the system design. Systems designed under these parameters have a minimum number of switches and controlling equipment; large areas of buildings are controlled by single switches. Often store rooms, warehouse areas, and other areas that do not receive continuous usage are combined on the same circuit as the main work areas. In such cases, the installation of additional switches to allow the separation of the unnecessary lighting from the necessary lighting is required.

While manual control can save large amounts of energy, people must remember to shut off unnecessary lighting. The installation of automatic controls is a more reliable method of generating energy savings due to reduced lighting use. Where a room or area is used intermittently for short time periods, a timer could be installed to turn the lights off after a specified time has elapsed. In areas where natural lighting is sufficient for the task, such as areas near the exterior of a building or courtyards, photocell switching can be used to control banks of light fixtures. Outside security and parking lot lighting which needs to be on only during periods of darkness should also be controlled by photocell switching. Consideration could also be given to controlling parking lot lighting with a time clock. This would allow the photocell to turn lights on at darkness and the clock to turn lights off after facility closing rather than continuing operation during periods of non-use. The savings resulting from light use reductions are proportional to the length of time of the reduction and the lighting load shut down. For example, a 100 fixture load of normal 8 foot twin fixtures drawing 172 watts each, turned off for 4 additional hours per day during a year, could save 17,888 kWh.

Reduce Light Levels
(Lighting: Reduce Light Levels)

In order to reduce light levels without hurting productivity and sales, a lighting survey is required. Comparing present levels with recommendations of the Illuminating Engineering Society (IES) will determine areas which can accept lighting reductions. Three ways to reduce light levels are: removing lamps, changing fixtures, and substituting task lighting. In addition to these items, maintenance of light fixtures (cleaning reflectors, lens, and bulbs) may allow lower wattage lamps to provide sufficient lighting.

For many buildings, especially office and retail buildings, the use and interior layout of the building was unknown at the time of design. Lighting systems were designed to provide adequate lighting regardless of the building use. Consequently, many buildings have light levels far in excess of need. One way of reducing this excessive lighting is by removing lamps. A lighting survey will determine the location and number of lamps which can be removed. It is also important to disconnect ballasts since they consume energy even when lamps are removed.

For example, removing two lamps from each fixture of a 100 fixture load of 4 foot, 4-lamp fluorescents operating 60 hours/week could result in savings of 24,000 kWh/year. Disconnecting the ballasts could increase the savings to 25,800 kWh/year.

Group Relamp Fluorescents
(Lighting: Relamp Fluorescents)

The efficiency of fluorescent lamps decreases with use while the amount of energy used by the lamp remains constant. Because of this, the cost/lumen continues to rise as light levels decrease. Group relamping of fluorescents should be performed at approximately 70% of rated life. The benefit of this practice includes cost/lumen decreases, no adverse effect on productivity or sales and reduced maintenance costs due to less frequent need for replacement of individual lamps.

Lighting Fixtures and Lamps
(Lighting: Refixture)
(Lighting: Replace Incandescent)

The replacement of existing lighting systems with new, higher efficiency equipment can provide a cost savings even though present systems provide adequate lighting levels. Replacement can include using energy efficient bulbs in existing fixtures, single higher wattage bulbs replacing multiple bulbs, or replacing fixtures with higher efficiency lighting types.

An example of using energy efficient bulbs is replacement of 4 foot, 40 watt standard fluorescent lamps with 34 watt, high efficiency lamps. This produces a savings of 6 watts/lamp. A 100 fixture load of 4 foot, 4-lamp fixtures operating 60 hours/week relamped with 34 watt lamps, could save 7200 kWh/year.

An example of single higher wattage bulbs replacing multiple bulbs is replacing two 60 watt incandescent bulbs with one 100 watt bulb (2 × 860 = 1720 lumens/120 watts vs. 1740 lumens/100 watts). The higher wattage bulb is more efficient, providing more lumens/watt.

The replacement of fixtures is the most costly measure for improving efficiency but should be evaluated. This is especially true in facilities using a large number of incandescent lamps. For example, fluorescents provide approximately 3.5 times as many lumens/watt as incandescents. The substitution of task lighting for area lighting can also provide a savings. An example would be a large but relatively unpopulated room in which the lighting is controlled by one switch. By lighting individual tasks it may be possible to reduce overall lighting levels or turn off area lighting.

Another consideration in changing fixtures is the useful life of the higher efficiency fixtures. If this life is longer than the remaining life of current fixtures, maintenance costs can also be reduced.

Windows and Doors

Single pane windows and doors have low resistance to heat flow. Measures in this area focus on improving the resistance to heat flow and reducing infiltration of air around the windows and doors.

Windows
(Storm/Thermal Windows)
(Plastic Storm Window)
(Add Additional Glazing)

Adding storm windows can double resistance of windows to heat flow as well as reduce infiltration.

Reduce Window Area

Another way of reducing energy loss is by reducing the window area. This can be accomplished by replacing windows with insulated walls or panels or, on a part-time basis, by using moveable insulation. Moveable insulation is normally placed in windows at night and removed during the day. The savings associated with this measure would depend on the amount of window area reduction and the type of insulating material.

Adding storm doors to wood or uninsulated metal doors increases resistance to heat flow and reduces infiltration. The addition of a vestibule can further reduce infiltration. In commercial facilities which experience heavy and continuous traffic, revolving doors can be used in place of existing doors. However, very high volume traffic is needed before revolving doors become cost effective. Energy savings can be maximized if revolving doors are used in conjunction with vestibules.

Infiltration is a major area of energy loss associated with building openings. The basic methods for reducing infiltration are caulking and weatherstripping. Both serve to seal air leaks. Caulking around window frames and applying weatherstripping at joints can reduce infiltration by as much as 20%.

Insulation

(Insulation: Floor)
(Insulation: Wall)
(Insulation: Roof/Ceiling)

Insulating materials added to roofs, floors, and walls can reduce building heat loss. Methods of applying insulation include spray-on, built-up roofs, blown, poured, rigid board, batts and adding drop ceilings.

Pipe and Duct Insulation

Adding insulation to pipes and ducts in unconditioned spaces can reduce energy loss and provide improved comfort as well as improved system efficiency. Insulation is appropriate for heating and cooling ducts and piping systems for steam, hot water heating and chilled water equipment.

A heating duct which passes through an unheated space loses heat to the surrounding space. This causes the heating plant to work harder to provide the necessary comfort level. The amount of savings depends on the temperature difference between the inside and outside of the duct or pipe, the size of the duct or pipe, the cycling time of the equipment and the amount of insulation.

Tank Insulation

The heat lost from a hot water storage tank must be continuously replaced by the addition of heat to maintain a ready supply of hot water. This heat loss occurs 24 hours/day whether the building is occupied or not. Storage tanks should be covered with a minumum of 3 inches of insulation. The estimated savings resulting from the addition of tank insulation is determined by the existing R-value of the tank walls, the R-value of the insulation added, the temperature of the water, the ambient temperature and the usage rate of the hot water.

Temperature Control

(Cooling Temperature Increase)
([illegible] and Air Conditioning)

(Heating Temperature Reduction)
(Heating Temperature Setback)

Energy savings can be achieved by reducing temperature settings during the heating season and raising settings during the cooling season.

One of the major factors that affects the heat loss and heat gain of a building is the difference in temperature between the inside conditioned space and the outside air. Reducing the difference in temperature results in reduced energy usage for space conditioning. For example, a savings of approximately 1% of heating energy use can be expected for each degree reduction in space conditioning temperature during the heating season. Temperature control can be one of the easiest and most cost effective conservation measures to implement. To ensure that setback is accomplished, the use of a clock thermostat is generally more consistent and reliable than manual temperature adjustments.

Heating Equipment

Tune/Maintain Heating Equipment

Periodic tune-up and maintenance of heating equipment is essential for efficient operation. Recommended maintenance practices include: Adjusting air/fuel ratios; monitoring stack temperatures, instrument calibration, and cleaning of burners, filters and boiler tubes. Lack of attention to any of these items can adversely affect the efficiency of the heating equipment. For example, a scale formation of 1/32 inch formed on boiler tubes can cause a 2% energy loss.

Replacement Equipment
(Heating Equipment: Replace Burner)
(Heating Equipment: Replace)

A typical equipment replacement would be a replacement burner. In this case, an old burner would be replaced by a more efficient burner. In some instances it would be cost effective to replace the entire heating system.

Hot Water Reset
(Heating Equipment: Hot Water Reset)

Hot water reset is accomplished with a device that controls the water temperature of a hot water heating system based on outside temperatures. The reset controls the water temperature so that heating demands can be met with minimum system losses.

By lowering the hot water temperature to a point that satisfies demand, standby losses are reduced. Lowering the temperature also avoids overheating on warm days.

Install [illegible]
[illegible]

Stack dampers function by reducing the loss of conditioned air through the draft hood and by reducing the loss of retained heat from the furnace/boiler after the burner has ceased firing.

[illegible]

Shutting off a pilot light during non-heating months can save an average of 360 ccf of gas annually. Gas can also be saved during the heating season by replacing a standing pilot with an electronic ignition system.

[illegible] Turbulators
[illegible]

Turbulators in the boiler firetubes cause the flue gas to swirl as it passes through the tubes. This causes a wiping action on the interior tube surfaces which eliminates the still air film on the surfaces. This results in a better rate of heat transfer. Turbulators allow more energy to be obtained from the flue gas before it is released up the chimney.

Maintain Steam System

Proper maintenance of various energy-associated systems in buildings should be a high-priority item. For example, in a 5 pound steam system a 1/8 inch diameter leak in a pipe or trap orifice could lose as much as 11,000 pounds of steam per month.

Cooling Equipment

Maintain Cooling Equipment

Normal maintenance of cooling equipment is an important factor in energy management. With cooling equipment, cleaning is extremely important in maintaining equipment efficiency. Dirty condensers or evaporators can increase power requirements drastically by reducing heat transfer. With reduced heat transfer, equipment running time increases due to inability of equipment to absorb and dissipate heat.

Proper operation can improve the efficiency of absorption chillers. Operating with the highest temperature possible, lowest pumping head, and operating individual chillers to full load before use of multiple chillers can all improve system efficiency.

Install Repair Economizer
(Cooling Equipment: Economizer)

The installation of an economizer (or repair of an existing economizer) can reduce cooling costs substantially.

The purpose of an economizer is to use outside air to cool a building rather than using mechanical cooling. It provides the cooling system with the ability to bring in outside air when the air contains less heat than the system return air from the building.

Heat Recovery

(Refrigeration Equipment: Heat Recovery)

Heat reclamation is the recovery and use of heat energy generated within a building that otherwise would be wasted. This recovery can come from heat presently wasted through ventilation exhaust, heat of compression (refrigeration), stack losses, process losses, heat of light, etc. The reclaimed portion of the wasted heat can be used to provide or supplement space heating, domestic hot water and process heating.

Heat reclamation can be accomplished in a number of ways including heat wheels, heat pipes, run-around systems, heat pumps and direct heat exchangers.

Heat reclamation should be investigated in facilities which have high exhaust rates, considerable refrigeration, or high process temperatures.

Ventilation Reduction

(Ventilation Reduction: Outside Air)
(Ventilation Reduction: Fan Time)

The reduction of ventilation rates has a direct effect on the heating and/or cooling load of a building. As ventilation rates decrease, the amount of air which must be heated/cooled to replace exhaust air decreases, thus reducing energy consumption. Ventilation fans themselves can also use large amounts of energy to supply the ventilation air.

Ventilation rates should be reduced to minimum code levels at all times and ventilation shut off during unoccupied periods. Ventilation reduction can be accomplished through well maintained dampers and controls, reduced fan speeds, and time clocks. In buildings where door passages and other infiltration media are sufficient to provide ventilation during occupied hours, mechanical ventilation systems can be turned off.

Savings will depend on present ventilation rates and schedules and the condition of existing equipment.

Maintain and Adjust Air Compressors

Depending upon the facility and its operation, air compressors can make up a major portion of electrical consumption.

Items to be considered regarding compressor operation include pressures, operating hours, leaks, equipment used and air intake. Using the lowest pressures possible for the least number of hours will have the greatest effect on the cost of operation in a well maintained system. Repair of leaks and the use of engineered nozzles for specific jobs will reduce the total air consumption thus reducing operating costs. Proper belt tension, sheave size and alignment will reduce power requirements, also reducing costs.

The use of cold dry air will also reduce operating costs as less energy is required to compress cold dry air than warm or excessively humid air. Installation of exterior air intake may be necessary.

Adjust and Maintain Refrigeration Equipment

(Refrigeration Equipment: Add Barriers)
(Refrigeration Equipment: Maintain and Adjust)

In facilities which use large amounts of refrigeration such as groceries, restaurants, and florist shops, the proper maintenance of refrigeration equipment is an essential energy management activity.

This maintenance includes cleaning evaporator coils, stacking products to ensure proper air flow, repairing door gaskets, ensuring proper defrost cycles and closing cases when they are not in use.

In addition to maintaining equipment to minimize consumption, the addition of curtains or covers to existing equipment can be cost effective. With open cases, the only separation between refrigerated and ambient air is an air curtain. The addition of plastic curtains to vertical cases can add to this separation, thus reducing loss. These curtains are made of overlapping strips of plastic which move to allow access to products. The addition of covers during periods of non-use can also add to the separation between refrigerated and ambient air. Both curtains and covers require additional maintenance but can provide savings.

Destratification Fans

Within a building, stratification of air occurs when warm air rises to the roof or ceiling. Destratification fans move this warm air from the ceiling down to the level of building occupants. This movement of air is especially helpful in high-bay buildings, where a large volume of air may be heated in a generally unsuccessful attempt to provide comfort for building occupants. Moving the warm air off the ceiling to a level where people are working generally requires less energy than heating additional air to replace the warm air which has risen to the ceiling. In addition, lowering the air temperature at the ceiling reduces the difference in the temperature between inside and outside air, thus reducing the conductive heat losses through the ceiling.

Efficient Cooking Procedures

Some actions which can be taken to reduce energy use in cooking are listed below.

1. Cook in the largest volumes possible.
2. Cook at the lowest safe temperatures.
3. Use the least amount of preheat time necessary.
4. Use timers on food warming equipment.
5. Schedule cooking to fully utilize equipment.
6. Turn on second units (fryers, broilers, ovens, etc.) only for peak business hours.
7. Use the smallest equipment possible.
8. Clean range top burners and coils regularly.
9. Place kettles and pots close together on range tops.
10. Place foil under burners.
11. Clean fryers and filters regularly. Oil daily.
12. Keep ovens closed during operation.

Dishwashing Improvements

Five actions for reducing energy used for dishwashing are:

1. De-energize booster heaters at night.
2. Use improved pan coatings to minimize wash time.
3. Operate dishwashers only at full load.
4. Use minimum hot rinse.
5. Consider using waste water to pre-heat water for the domestic hot water system.

Senator **Evans**. Thank you, Mr. McLogan.

Mr. Thomas, you mention in your testimony that you do have the opportunity to relate what you're doing to, let's see, I think on—you talk about energy efficiency and I agree with you that sometimes you use the term "conservation" and to many people that means putting a sweater on or lowering your thermostat when I think it's probably more accurate to talk about energy efficiency, just getting more done with the energy we have available.

Energy efficiency is one of the resources that's counted in your 10-year plan. You say the utilities' energy efficiency efforts can be considered by the Commission in determining the rate of return. You heard my question of Secretary Fitzpatrick. Do you allow any—you say it can be considered; is it being considered and, if so, how are you considering energy efficiency in considering the rate of return?

Mr. **Thomas**. It would be considered in terms of a company offering exemplary services or it would be considered in terms of a company that had been able to avoid new capacity through the use of conservation programs. We don't have good examples of either yet. We've got companies who are probably doing on an average basis, but none that are exemplary yet.

Senator **Evans**. So you say it can be considered, but so far it has not been?

Mr. **Thomas**. It has not yet.

Senator **Evans**. Would you favor or how do you look at the fundamental concept of perhaps allowing a higher rate of return for those who engage in energy efficiency as a way of gaining the necessary new resources as opposed to those who are going out and building additional plants?

Mr. **Thomas**. I think that the fundamental concept is sound. In my opinion and in a long-range view, it's somewhat of a transitional concept. In other words, I think the basic problem lies with the fact that our regulatory system is designed around the concept of decreasing marginal costs, and we haven't had that since the early 1970's. And since we operate a rate base, form of regulation, we just have a basic mismatch between the two.

I think in the short term we need to look at some sort of incentive program or some way to figure in, the idea that a utility company has taken, designed programs which can avoid new capacity. In the long term, I think there are basic changes in the industry that need to take place. You know, I think that energy will eventually be a service rather than a commodity, but that's longer term.

Senator **Evans**. You mentioned a cost-benefit analysis must be conducted for each individual program. This is to underscore the importance of programs being cost-effective and beneficial to all the ratepayers and to the system as a whole.

Wouldn't it be appropriate or how do you view the appropriateness of a program which may not be cost-effective on the margin to a particular ratepayer but which would be cost-effective to the system as a whole? In other words, for the system it's less cost than they can gain additional resources, but it's not cost-effective for the particular ratepayer.

Would it be appropriate, in your view, for that utility to offer the necessary subsidy, if you will, or the necessary amount, some share of that cost, to make it cost-effective, the remainder cost-effective, for the ratepayer and still retain the cost-effectiveness for the system?

Mr. THOMAS. Absolutely. That's the basis for a lot of the rebate programs, especially say in lighting, in which if the utility company will make up the difference between a high efficiency light bulb and a regular light bulb, it really pays off. For the system as a whole, we can generally recover energy at the rate of, say, $500 to $700 a kilowatt through conservation programs, whereas current costs of the best coal plants we're building are at least $1,200 a kilowatt.

Senator EVANS. At least.

Mr. McLogan, do you have any view from Michigan as to that concept of allowing a differential rate of return for utilities based on how they get their electricity or how they generate?

Mr. McLOGAN. We have never implemented such a strategy for our electric utilities. We did implement a pilot on one large gas utility, and the results were mixed, enough so that we're uncertain exactly how to proceed at this point.

Senator EVANS. Mixed in what way--just whether they gained the savings that they were asking a rate of return on?

Mr. McLOGAN. Yes.

Senator EVANS. Senator Johnston.

Senator JOHNSTON. Thank you, Mr. Chairman.

Mr. McLogan, let me say that I certainly share your view that we do not want to prevent States from implementing their own programs, but I don't understand why the passage of S. 410 would prevent Michigan from putting in its own program. What would be the possible illegality of the Michigan program?

You passed a Michigan State law. What's the legal objection?

Mr. McLOGAN. The law that I referred to exists for RCS, not for CACS. The CACS in Michigan is done pursuant to the Federal program and to an order of the Commission. Our concern is that the legal challenge that was brought to RCS, despite the clear mandate from Congress and a State act and the Commission's enabling order, it was still challenged. The case was still heard, and the court opinion, which we have shared with the staff of the committee, cited only the underlying Federal law for its dismissal of the complaint, not the State statute, even though it was being brought pursuant to the State program.

Therefore, we are very worried that if the Federal act is repealed and there is only an order of the Commission or a subsequent State law that the program may be at risk. And if it is at risk, being challenged in court, it seems unlikely to me that the utilities and private sector would want to continue to invest in a program that may in fact not survive.

Senator JOHNSTON. Well, would the State be likely to pass such a law?

Mr. McLOGAN. I don't know, Senator. My feeling is that we would get a fair and speedy hearing in front of the public utilities committee in Michigan, but I certainly can't speak for our legislature.

Senator JOHNSTON. Well, you say we want our program. Who are you referring to?

Mr. McLogan. I was referring to the Commission, sir.

Senator Johnston. To the Public Utilities Commission?

Mr. McLogan. That's correct.

Senator Johnston. Well, now even at the Public Utilities Commission level you say the program is not subsidized but is cost-effective.

Mr. McLogan. That's correct, sir. I did indicate that it is subsidized in terms of utility recordkeeping and some publicity, but those amounts are minimal. The cost of the audit is essentially paid for in full by the recipient.

Senator Johnston. Well, if that's so, I certainly cannot understand what the basis of the objection would be. You've got private sector auditors and private sector people doing the work and being paid for fully by the people, and all the utilities do is a little publicity. The utilities could do that on their own, couldn't they, without a law?

Mr. McLogan. Well, I would like to think that that's true, and I would certainly assert that it is true in the event we were challenged. However, since I'm not an attorney, I have to take the advice of our counsel, and our counsel advises us that we would be better off if the repeal could be written in another way.

Senator Johnston. Well, it would be nice if you could rely on the Federal law and didn't have to count on the legislature to pass their law, but I mean if it makes sense for Michigan, the legislature, which, after all, is their official policymaking body for the State, ought to recognize that and pass it. And I would submit to you I believe it is clear that a State would have that right.

I can't conceive of what the objection could be. There's no antitrust implication that I can see, no unconstitutionality, and we want you to be able to do that. But I don't think you have to have a Federal law with the uniformity that Mr. Thomas talked about in order to achieve what you want to in Michigan.

Now what are the participation rates that you're talking about? You said they were better than you had expected?

Mr. McLogan. The publicity's only been out for about 6 weeks now, so it's difficult to gauge. But given the mailing lists of those who received it we expected and companies expected they might get a couple of hundred in the first few weeks, and they got 1,000.

I might also point out that in the RCS Program, which we have pursued with vigor, Michigan has done more audits per capita than any other State, so there was a framework to go into and, therefore, the program was, I think, not a surprise in that sense and, therefore, it was anticipated.

Senator Johnston. You did a pilot program on this before you put it in?

Mr. McLogan. We did, sir.

Senator Johnston. And your cost? What was your average cost?

Mr. McLogan. I have a trusty staff person who I think might have that answer. May I ask him?

Senator Johnston. Yes, surely.

[Pause.]

Mr. McLogan. The cost varied between company, from anywhere between $50 and $200. It was paid for by the recipient during the pilot.

Senator JOHNSTON. Now was that under the amount allowed for by the Federal statute or the regulations?

Mr. McLOGAN. I'm advised that it was our discretion as to what the fee would be, and we did it at cost.

Senator JOHNSTON. I know, but under the CACS there are limits to what you can pass along, are there not?

Mr. McLOGAN. Yes.

Senator JOHNSTON. $15 per apartment unit. Were these under that limit? Even though you were doing it on your own, would they have been under that limit?

Mr. McLOGAN. Very possibly. Again, it's hard to say.

Senator JOHNSTON. But it's also possible they would not be. I'm wondering why you say they were not subsidized but were cost-effective. When you say they were not subsidized, you are saying that this was a voluntary program not undertaken under the law and that you passed the cost along, whatever it was.

Mr. McLOGAN. Perhaps I misunderstood your question. Are you asking me, was the cost of the audit passed along in the instance where apartments were done to the apartment renter? The answer to that is no, it wasn't.

Senator JOHNSTON. To the apartment owner?

Mr. McLOGAN. To the owner, yes, sir.

Senator JOHNSTON. All right. Now was the cost to the owner, you don't know whether that would have been within the Federal guidelines or not?

Mr. McLOGAN. I'm afraid I don't.

Senator JOHNSTON. OK. So you don't know whether the program would or would not be subsidized if put into operation in the sense of the ratepayers, the rate base paying part of the cost of these energy audits for the owners of commercial and apartment buildings?

Mr. McLOGAN. It's our determination that it would not be subsidized and as it is presently formulated it simply would not be, again, as I indicated, with the exception of some modest publicity costs and the required recordkeeping by the utility.

Senator JOHNSTON. My question is how do you arrive at that? If you do not have records as to how the cost per unit comported with what CACS would have allowed, how do you know that?

Mr. McLOGAN. The budget is preestablished and those who participate in it and the amounts of moneys that go back and forth are tracked on that basis.

Senator JOHNSTON. On what basis?

Mr. McLOGAN. On the basis of the fact that the cost, being preestablished, is done for that amount of money. That's all there is.

Senator JOHNSTON. What amount of money?

Mr. McLOGAN. The amount of money that's charged either for the apartment owner or for the other business. The reason I have to prevaricate a little bit, Senator, is because, as a matter of fact, in Michigan hardly any apartments have yet taken advantage of this and only a few were a part of the pilot. Much of the interest and most of the interest is on the part of small business like bowling alleys, soup kitchens. There were even some churches and other nonprofit organizations. And the greatest interest in our State is among people who own those kinds of buildings.

Senator JOHNSTON. Mr. Thomas, you don't have any similar kind of program in Texas?

Mr. THOMAS. Not statewide. There are several of the utilities that have similar programs.

Senator JOHNSTON. Do you see anything that would prevent utilities from or States from having that kind of program if they wanted to?

Mr. THOMAS. We have full statutory authority to implement that sort of program in Texas, State statutory authority, yes, sir.

Senator JOHNSTON. Do you recommend that kind of program for Texas and, if not, why not?

Mr. THOMAS. The difficulty with that specific program for Texas is that that is not the energy-consuming sector where we can make the greatest gains. We need to move up a notch in terms of the commercial sector.

Those under 4,000 kilowatt hours a month are not where the problem exists. We need to get into the next sector, which includes most restaurants, most of the businesses on demand rates, and that's the place in terms of benefit to the utility system where we can gain the most benefit. I wouldn't go for a small commercial program, no.

Senator JOHNSTON. One final question, Mr. McLogan. In your RCS Program do you have any studies on what the savings per unit is or the total savings or the cost-efficiency ratio?

Mr. McLOGAN. About 20 percent of the eligible customers have taken advantage of the program, and it's our estimate that as of the midpoint of 1985 the program will have paid back its costs and will not be on a payback basis through about the middle of this year forward.

Senator JOHNSTON. Thank you, Mr. Chairman.

Senator EVANS. Senator Ford.

Senator FORD. Mr. McLogan, I'm not a lawyer, so I have a hard time keeping up with my legal colleagues, but my State is very concerned, as your State apparently is, as it relates to the repeal of RCS and CACS. And they need, or think they need, a certain kind of legislative language in order to permit them to continue.

Texas is always different from everybody else and so I'm sure that whatever they do down there is in their best interest. And I have some memories of Texas. One is Fort Hood, back during World War II, and Cow House Creek, and a few things like that, and I understand how you all operate down there.

But the States that are not quite like Texas do have some concern about this, so I voice my concern, Mr. Chairman, into the record for my State of Kentucky.

Mr. McLogan, there was litigation as it related to the RCS Program?

Mr. McLOGAN. Yes, Senator, that's correct.

Senator FORD. And they came down on your side based on the CACS Program?

Mr. McLOGAN. Came down based on the Federal law and the enabling rules of DOE and not on the State statute, which was parallel.

Senator FORD. All right. And that was in Federal court?

Mr. McLOGAN. Yes, sir; that's correct.

Senator FORD. Mr. Thomas, you said in your statement, and correct me if I'm wrong, that we don't need a uniform program; we need uniform results. Is that correct?

Mr. THOMAS. Yes, sir.

Senator FORD. Well, if you're sitting where I am and I was out there where you were, what would you tell me to do in order to have a national uniform result?

Mr. THOMAS. I believe the uniform results we need are efficient utility systems which are using their plant investment efficiently, and I believe that responsibility lies with the State regulators.

Senator FORD. Well, then you're saying there's nothing I can do then to have uniform results in saving the use of generated electricity? You say leave it up to the States. There's nothing mandatory, and if this story is correct, we're going to have another shock ahead. You're going to make it awful good for my State as it relates to coal, if we can get the railroads to reduce their rates to your State of Texas.

Mr. THOMAS. Yes, sir.

Mr. MCLOGAN. And my State, too, Senator.

Senator FORD. Well, I just understood it was only Texas. Fifty years ago we stopped people from robbing trains; now they're keeping trains from robbing people. [Laughter.]

So, you know, there's a lot of factors here. If you could just get the cures, I think it is, that a lot of us—in cars and all those rate problems that are going around. If we get your rates reduced, that'd help a great deal, wouldn't it, with some of your problems?

Basically what we're trying to do—what I think we're trying to do—here is to find some way that will be energy-independent, and we get kicked in the buns every so often and then we rush to have some kind of legislation out there, and we react instead of acting. And every time we ease up and you see no lines at the service station, which is the biggest criterion, then everybody says everything's fine, leave us alone.

But the minute they get in trouble, they rush up here and sit out there and say hey, we need help. Now you can't have it both ways. There's got to be mutual cooperation here between the Federal Government and the States in order to come down on the side of saving energy for this country, so we can be something like farming. We're the only country probably that would not have to import food if we got into controversy, but we sure as the world would have to import energy and we would be in real trouble.

So we need to look at it. It's a large factor as it relates to the defense of this country. And I've been in Texas and I know how you all feel about defense, and you ought to feel as strongly about energy in Texas as any other State. But somehow there has to be a meeting of the minds, as I see it, as it relates to the defense of this country.

You made one statement earlier. Well, let me go back. I just want to be sure that I'm correct. You as a Commissioner with experience in efficiency and conservation and that sort of thing say just leave us alone; we'll take care of ourselves as it relates to energy efficiency and saving and uniform of results. Is that what you told me?

Mr. **Thomas**. As long as your goal, your principal goal, is the efficiency of the utility system.

Senator **Ford**. We can't have any goals if we don't set something nationally, and if we back off and repeal everything, then you're on your own.

Mr. **Thomas**. Well, but, Senator, if your goal is national security, then design a program that actually saves more energy.

Senator **Ford**. Well, that's fine, and I asked you for that. You said leave it to the States.

Mr. **Thomas**. Well, but it's not my impression that the driving goal behind the national energy policy right now is national security.

Senator **Ford**. Well, it ought to be. The whole thing, when you get back to it, it was introduced after 1979.

Mr. **Thomas**. I agree.

Senator **Ford**. We were in trouble and the House finally arrived at a synthetic fuels legislation. They call it the Defense Production Act. You see, but everybody forgets those things. It doesn't take long for us to forget in this country, except some things. We don't forget Bittburg. But nevertheless, nevertheless we've got to be stirred again.

You emphasized cogeneration in your statement.

Mr. **Thomas**. Yes, sir.

Senator **Ford**. Does this drive electrical rates up or down?

Mr. **Thomas**. Down.

Senator **Ford**. It drives them down how much?

Mr. **Thomas**. We are currently getting cogeneration contracts that average from 8 to 12 percent below what the utility could build the same plant for.

Senator **Ford**. Eight to twelve percent?

Mr. **Thomas**. Yes, sir. That's because of the energy efficiencies inherent in cogeneration.

Senator **Ford**. How does it relate to a system charge?

Mr. **Thomas**. I don't understand your question.

Senator **Ford**. Well, you take the whole system, that it would reduce it 8 to 12 percent.

Mr. **Thomas**. Over what the utility could build that same plant for.

Senator **Ford**. What does it do to the existing rate, then?

Mr. **Thomas**. Any time you add new capacity in a situation of increasing marginal costs—and that's what we've had since 1970—all rates go up.

Senator **Ford**. So cogeneration does under those circumstances make the rate go up?

Mr. **Thomas**. Like any new capacity would, yes, sir.

Senator **Ford**. So instead of driving it down 8 to 12 percent, we just stopped there and I hadn't asked the next question. We left the record to show that it reduced the cost by 8 to 12 percent over the construction, but yet it is new on line so it does drive the rates up?

Mr. **Thomas**. That's correct, sir.

Senator **Ford**. It makes it difficult for the normal constituency out there to understand that, doesn't it?

Mr. **Thomas**. It's a difficult question.

Senator FORD. A difficult question. It's just like trying to explain anything we do. Daddy always told me never cast a vote you have to explain. [Laughter.]

There is not one up here. [Laughter.]

Thank you, Mr. Chairman.

Senator EVANS. I wish I'd thought of that. There isn't one up here that you don't have to explain.

Senator FORD. Well, just like my friend behind me said, there's no victories in Washington, just varying degrees of defeat. [Laughter.]

Senator EVANS. This exchange has brought up at least a couple of other questions.

Mr. Thomas, if in fact we back off to a State program, how does that jibe with—you know, if we believe that we have certain nonrenewable resources and those nonrenewable resources—and I'm thinking in particular of oil and gas—have other uses which are perhaps ultimately more valuable than burning, especially ultimate uses for not this generation but perhaps future generations, what if one State embarks on a significant conservation or efficiency program and other States do not?

If you leave it at the State level, isn't there a national interest in preserving or extending the life of nonrenewable resources and, if so, would that mandate some kind of Federal program?

Mr. THOMAS. I think there is an obvious national interest in preserving resources. Texas was the first State, even before the Federal ban, to ban the use of natural gas as a boiler fuel. We tried that for several years and found out we ended up shipping our natural gas to California and were importing coal.

Senator FORD. That's not all bad, Mr. Thomas. [Laughter.]

Senator EVANS. But doesn't that argue pretty loudly? If that was the rational thing to do and it was important to achieve that kind of conservation, then a national program wouldn't have allowed California to do that?

Mr. THOMAS. That's true. Once again, I go back. You have to pretty clearly specify what your goals are because the energy policy area suffers from conflicting goals, and preservation of nonrenewable resources is not always in perfect harmony with national security, and neither of those two are very often in terms of building the most efficient system economically for the consumer.

I guess I would go back to saying if your goal is to maximize the effort to preserve nonrenewable resources, then go with national programs that save more energy, target the industrial sector. This particular program we're discussing today doesn't save a whole lot of energy; it's not a big energy-consuming sector compared to the other sectors.

Senator EVANS. Well, are you suggesting we ought to broaden it to include industry or the industrial sector?

Mr. THOMAS. If it is the national effort, either for national security or to save nonrenewables, then there are a lot of things we need to do. We need to set building energy performance standards nationwide. We need to consider a lot of things which were considered and debated and have never been put into place.

In lieu of those, then as a State commissioner I drop back to the major goal of building the most efficient utility system for the ratepayers of Texas, and I think there are better programs to go about that.

Senator EVANS. In your view, which side do you come down on? Is there a national interest either for security or for conservation of nonrenewable resources that would require some kind of Federal act if, different or changed from this one or, in your view from your experience, is it better just to bow out of the field entirely and leave it to the States?

Mr. THOMAS. No. I would support a strong national energy policy. I do not think one exists now.

Senator EVANS. I agree with you on that.

Mr. THOMAS. And if one existed, then we would do our part.

Senator EVANS. Mr. McLogan, how about you on the same issue?

Mr. MCLOGAN. I agree. I think there is a compelling national need, and that's one of the reasons that I fear the repeal might send the wrong signal. I think it's just as important to save energy from any customer who has the capacity or capability to save it, and if this program can help focus and identify those customers and then turn them over to the private sector to do the work, I think we're all better off.

Senator EVANS. In your testimony about the program and the potential problems you'd run into in Michigan if the program were repealed, would it handle Michigan's problems if the Federal program were retained but you weren't faced with all of the myriad of regulations and requirements that are set forth in the Federal program? You'd use it as a basis for moving ahead on a State-oriented program but not be required to do all of the things that you are now required to do.

Mr. MCLOGAN. Yes, sir. I think what you have described would work perfectly.

Senator EVANS. Just one final question of Mr. Thomas. You mentioned in your testimony that one of the successful programs among several of the Texas utilities has been the energy-efficient appliance rebate approach. To use that effectively, do you have any view on the requirement of setting energy efficiency standards for appliances or at least having a national standard on appliances that can be reflected then on the appliance itself?

Mr. THOMAS. I believe there should be a strong national standard. We have found the national program to be very helpful in marketing State energy efficiency rebate programs.

Senator EVANS. But currently the national standard is no standard.

Mr. THOMAS. I understand that. But at least——

Senator EVANS. But you would feel that it would be more appropriate to insist on a standard standard instead of a no standard?

Mr. THOMAS. That was an example of a national research program which was very helpful. Even though there is currently no national standard, the yellow tag still exists on the appliances.

Senator EVANS. Thank you very much. Anything further?

If the commercial program were to be repealed, can the remaining RCS authority be the necessary legal basis for State programs as far as you are concerned, Mr. McLogan?

Mr. McLogan. I'm not a lawyer, but I would say probably not because the programs, at least as they are implemented and working in Michigan, are rather dissimilar.

Senator Evans. If there are no further questions, thank you very much, gentlemen.

The next panel, panel 2, Mr. Larry Spielvogel, consulting engineer from Wyncote, PA; Mr. Sal Ferruggia, president, Garnet Plumbing Co., from Perrineville, NJ; Mr. Walter Reckinger, Sheet Metal & Air Conditioning National Contractor's Association; Mr. Thomas Norton, American Supply Association; Mr. Patrick O'Connor, Alliance for Fair Competition; Mr. Norm Hughes from Metamora, MI; and Mr. Norris McDonald from the Energy Conservation Coalition.

Thank you, gentlemen. Since, as you can all see, it's an extensive panel and some have presented rather extensive testimony, I would ask that the testimony be summarized so that we can get to questions. All of the statements will be entered in full into the record.

I might also say that I've had the opportunity to read the testimony of each of you—the purpose of the hearing is not to address the competition issue, but we would be interested, of course, to hear any concerns by any of you. I guess the question, then, is, why isn't the repeal of CACS the best way to promote competition, remembering that the focus of the hearing is on the bill to repeal the CACS.

So, with that, Mr. Spielvogel, you start.

STATEMENT OF LAWRENCE G. SPIELVOGEL, CONSULTING ENGINEER, ON BEHALF OF THE AMERICAN CONSULTING ENGINEERS COUNCIL

Mr. Spielvogel. Thank you, Mr. Chairman. My name is Larry Spielvogel, and I am an independent consulting engineer in Pennsylvania, specializing in energy management and buildings. My clients range from the corner drug store to the building that we're now sitting in. My goal is to provide the best energy advice I can to my clients that is in their best economic interest.

I am measured by results on utility meters and utility bills. I'm here on behalf of the American Consulting Engineers Council, which has long been a strong supporter of energy conservation. Probably no one knows more about the technical aspects of energy conservation in buildings than the consulting engineers in America.

However, the CACS Program does not appear to us to be the correct approach. While there is no doubt that this law will provide some benefit to a limited segment of the public, there are some very serious concerns and consequences which do not justify the benefits. It is the position of the council that the CACS law should be repealed.

As an engineer, I have the ability to examine the technical issues, and as a businessman the practical and economic issues. Because the technical requirements in the law are seriously flawed, it will never be possible to achieve the desired or expected results. Congress cannot yet legislate science and engineering.

For example, I occasionally recommend to my clients that they knowingly and intentionally waste energy in order to save money on their utility bills. CACS obviously doesn't allow this. Most electric rates for small commercial buildings have both a demand and an energy charge.

Examining a typical bill indicates that close to half the cost is for demand, with most of the remainder being for the quantity of electricity consumed. As a result, a piece of equipment, such as an air conditioning unit can operate for almost 100 hours per week for the same cost as operating that same piece of equipment for 15 minutes when the building is at its highest demand for the month.

Therefore, some of the measures required by the CACS law, such as automatic energy control systems, can actually result in an increase in the electric cost to that consumer.

I am going out to the State of Washington next week to do some seminars, and I got some local rates from the Washington Water Power Co. and I took as an example a church that uses 3,000 kilowatt hours a month.

If we are able to reduce the electricity consumption in that church by 10 percent or 300 kilowatt hours a month, yet we raise the demand by virtue of that action by 20 kilowatts, the total utility bill to that church will actually increase by 8.5 percent, under Washington Water Power rates, and with many other utilities the increase for similar actions will be 20, 30, and 40 percent, even though you have reduced the consumption.

The public will also be misled. This misleading information to consumers is a fatal flaw in the program. There are a number of requirements in the law which preclude the utility from making recommendations that are in the best economic interest of the building owner or occupant. For example, fuel-switching for heating and cooling is prohibited by the law. Only replacement with more efficient equipment of the same fuel type is allowed.

Any examination of the marketplace will indicate that a substantial number of energy actions taken by building owners have included fuel-switching. Many building owners have switched from oil to gas heating and vice versa. Others have switched from electric heat to gas heat or from gas heating to heat pumps, depending upon the cost of energy at any particular location.

In many instances today, gas air-conditioning systems are being replaced by electric air-conditioning systems. Generally speaking, when people do make conversions, it has been my experience that building owners generally opt for the more energy efficient equipment available. Yet section 710 of the CACS law precludes recommendations for fuel-switching, even though fuel-switching on its own may have a far better payback and save far more energy than all the other measures required in the CACS audit combined.

This situation creates another interesting dilemma if it were changed. Can you see electric utility companies recommending conversions from electric heat to gas heat for their customers? Or can you see gas companies recommending the use of electric heat pumps for heating to their audit customers? This would put utilities in an awkward position, to say the least.

In summary, competent advice on energy to owners and occupants of commercial and multifamily buildings is readily available from many types of taxpaying businesses in the free enterprise system. The cost to all utility ratepayers, taxpayers and problems with the CACS law far outweigh the anticipated benefits. We, therefore, strongly urge that you repeal this onerous law.

Thank you.

[The prepared statement of Mr. Spielvogel follows:]

american
consulting engineers
council

1015 FIFTEENTH STREET N.W. WASHINGTON D.C. 20005 (202) 347-7474

TESTIMONY
of
LAWRENCE G. SPIELVOGEL
Lawrence G. Spielvogel, Inc., Wyncote, Penna.
May 6, 1985

Mr. Chairman, the American Consulting Engineers Council and I appreciate the opportunity to testify on the Residential Conservation Service (RCS) and Commercial and Apartment Conservation Service (CACS).

The American Consulting Engineers Council (ACEC) is a national trade association consisting of over 4,300 engineering firms and 51 state and regional organizations. All member firms are headed by professional registered engineers. ACEC members are heavily involved with energy conservation and have performed energy audits and complex technical analyses for every type of building from single family dwellings to huge industrial complexes.

I am an independent consulting engineer from suburban Philadelphia and a sole practitioner for the last 15 years. As a registered professional engineer in 49 states, I offer professional engineering services solely in the best interest of my clients. For the last 26 years I have been performing energy studies, with 97 percent of my business being in the private sector. My practice is almost exclusively concerned with energy management in buildings, and predominantly existing buildings.

My clients range from many Fortune 500 companies to McDonald's Restaurants, and include the owners and operators of more than 100,000 multi-family dwelling units. I have been an active member of ASHRAE, and for 9-1/2 years chaired the ASHRAE Standard 90 Committee on Heating, Ventilating and Air Conditioning Systems, which standards now serve as the basis for building codes in 47 states.

I am very familiar with the types of buildings covered by the Commercial and Apartment Conservation Service (CACS), especially by virtue of serving as a volunteer with the Interfaith Coalition on Energy in Philadelphia. The Coalition consists of the Board of Rabbis, the Archdiocese of Philadelphia and the Metropolitan Council of Churches. Our goal is to reduce utility bills in religious buildings. It is estimated that our constituency consists of 2,500 religious institutions with 6,000 buildings and a utility bill of $100 million a year, just in the immediate Philadelphia area.

About three-quarters of those buildings qualify for the CACS program. I would emphasize that I accomplish energy audits personally and follow up during implementation in order to measure results, so I speak from many years of first-hand, in-depth personal experience.

RCS

In 1981 the U. S. Senate debated the RCS program (S. 12135 C.R.) in an amendment to zero out the program offered by Senator Dole to Interior Appropriations Bill. At that time the major argument for retaining the program was that it was too early to pass judgment and it still deserved a chance. It has now been seven years since the program was enacted and arguments are pretty well set on both sides on the value of the program. The Department of Energy has done, we understand, over a dozen studies on RCS and the utility trade associations and the utilities themselves have also done studies. We have done no studies but only offer our observations from a consulting engineering perspective on the RCS and CACS programs and residential and commercial energy conservation in general.

Consulting engineers do energy audits and technical analyses--mostly in the commercial market but some residential. We have observed and I think the Energy Information Administration's figures bear out, unprecedented energy conservation in this country over the last five years.

Fifteen years ago energy conservation used to be pretty much the exclusive realm of engineers mostly by nature of their training in the mechanical/electrical areas. That is no longer true. Architects, mechanical contractors, electrical contractors, plumbing, heating and cooling contractors, sheet metal and air conditioning contractors and various other combinations of entrepreneurs now pervade the market. Competition is stiff. There is an excellent weekly publication called the "Energy Users News" that chronicles the latest projects and developments in energy conservation. It gives very good summaries of who is involved in the business, what they are doing and the results. It concentrates on what's going on around the country and not just in Washington, D.C. We would urge Senators and their staffs to occasionally read EUN to get a good objective view of what's current in the country in energy conservation. ACEC, by the way, has absolutely no connection with the publication other than that our members read it.

The 1981 Congressional Record, .S. 12138, revealed predictions of energy savings of $33 billion after five years. From studies we have seen that goal was never approached.

We would like to offer briefly some information from a two-year cost benefit study done on the RCS program and then move to CACS. The study is "1983 RCS Highlights: Cost-Benefit Evaluation of the Residential Conservation Service Program," by Centaur Associates. At the time the study was completed, RCS was operational in about three-quarters of the states and in those states, at least 90 percent of all eligible customers had been given the opportunity to request an audit. So we believe the results of the study must be given some credibility.

The study revealed an annual response rate of 1.7 percent nationwide. Predictions for the program were 7 percent accumulating to 35 percent of the population after five years.

Quoting from the study, "RCS may thus reduce the nation's total energy use by two-hundredths of one percent. Even if energy savings are drastically underestimated or participation rates sharply increase, the overall impact of RCS on the nation's energy problem is likely to be of tangential significance."

"On a weighted national average the (cost benefit) ratio is approximately .7. Because this ratio is less than 1.0, there is an implication that the investments made in energy conservation are not effective from a national or societal perspective."

"Only two million utility customers are taking advantage of a program (with a $0 to $15 payment) that is being subsidized by about 75 million utility customers."

In addition to these facts, whatever savings that may be attributed to RCS must be considered in the context that a certain amount of residential energy savings is occuring alongside it and would have occured without it.

The figures and conclusions given by this study and others seriously question the effectiveness of RCS and are difficult to refute. If anyone would like our support to extend the program, they will have to overcome these facts.

CACS

While there is no doubt that this law will provide some benefits to a limited segment of the public, there are some very serious concerns and consequences which do not justify the benefits.

First, consider the concept of the program.

The law requires utilities to offer energy audits to small commercial and apartment buildings. Most eligible buildings are profit-making businesses. Some may be extremely profitable though small in size like a jewelry shop or a small high-tech business. The point is these businesses are more than capable of knowing the value of and affording an energy audit. If the desire is to help small and struggling businesses, then a program should be designed that way. CACS makes no distinction.

PROBLEMS WITH THE LAW

Increases in Energy Costs

Some measures required by the current law can reduce energy consumption, but result in increased energy cost. For example, the use of night setback and shutoff for heating and cooling in covered buildings will almost always save energy. However, in buildings using electricity and/or steam provided by utility companies that have demand charges, it is quite possible that without special precautions, high demands may be incurred during morning start-up, resulting in higher energy cost, which can more than offset the cost of energy saved.

Increases in Energy Use

Some measures required by the law can increase energy consumption. Examples include the addition of insulation to buildings that have heat producing equipment or are in warmer climates. For example, a typical pizza shop is self heated by its ovens, so that it is rarely necessary to purchase any energy for space heating. Adding insulation will not result in reductions in heating energy consumption, since little or none is used to begin with. Moreover, adding insulation in such a situation increases the amount of cooling energy required because the heat generated by the ovens will be retained in the building, especially during mild weather.

Won't Allow Increase in Performance

The law does not allow modified or replacement lighting to provide any more illumination than already exists. This can be a problem with security lighting, since building operators are often motivated to provide higher levels of illumination and therefore better security, while improving energy efficiency at the same time. Such actions are not allowed to be recommended under the law.

Limited Motivation

While both owners and occupants of commercial buildings are covered under the law, it is not very likely that tenants in commercial buildings will actually implement the results of the energy audit because they are not inclined to invest their money in order to improve the landlord's building.

Program Costs not Equitable

As past evidence has indicated, low-income rate payers have been burdened with the cost of the RCS program. An audit is of no use to those who cannot afford to install recommended energy conservation measures.

OTHER PROBLEMS

Subsidized Competition

The CACS provides utility ratepayer subsidized competition to private tax paying businesses, such as consulting engineers, contractors, equipment suppliers and shared savings vendors.

In the private sector audit costs vary substantially, depending primarily upon the needs in each building being audited. Audit costs can vary depending upon the number of units, the complexity of the building and its systems, the cost of the various forms of energy being used and the existing energy performance of the building. For example, if the energy consumption of a building is already low in comparison with the norm for that type of building, it is not very likely that much additional conservation can be achieved. On the other hand, if the energy consumption of a building is high in comparison with the norm, it is likely that much more effort will be justified in comparison with the building having low energy consumption. Yet, the CACS program will virtually require that as much effort be expended on the building with low energy consumption as the building having high energy consumption.

Achieving Results

What really counts in energy conservation is obtaining measured reductions in energy consumption. It has been my experience that actually accomplishing these reductions at the meter often requires professional advice during and after implementation of recommendations. When a building owner or occupant has serious questions regarding any measure that cannot readily be answered in a convincing manner, he tends to do nothing, rather than make a potential error. Such services and advice are not available or required by CACS. It takes a continuing and personal commitment on the part of both the occupant of the building and the individual providing technical services in order to achieve these results.

Responsibility

Energy conservation is not a one-shot operation. Once the person accomplishing the audit has become familiar with a particular building, it is frequently essential that this person be available to evaluate contractors' proposals, answer specific questions and provide advice on a continuing basis. It is necessary for any organization to provide such services to its customers in order to stay in business. Any organization must also stand behind the work it does, both technically and legally. Where problems or disputes arise as a result of energy audits, the parties must be willing to work out these problems or take them to court.

Most covered building owners and occupants may be intimidated by utility companies, and thus may not pursue issues where they feel they have been wronged. On the other hand, when dealing with private businesses offering these services, it is likely that these businesses will bend over backwards to maintain satisfied customers in order to establish or continue their reputation in the community.

The constraints and requirements placed on utilities in performing the CACS program precludes them from operating in the fashion which they might deem desirable, thus creating additional potential for dispute.

CACS Measures not in Owners' Best Interests

There are a number of requirements in the CACS program which preclude the utility from making recommendations which are in the best economic interest of the building owner or occupant. While most of the program measures may be energy effective, some are not cost effective. For example, fuel switching for heating and cooling equipment is prohibited. Only replacement with more efficient equipment using the same type of fuel is allowed.

Any examination of the marketplace will indicate that a substantial number of energy actions taken by building owners have included fuel switching. Many building owners have switched from gas to oil heating, and vice versa. Others have switched from electric to gas heating, or from gas heating to heat pumps, depending upon the cost of energy at any particular time. In many instances today, gas air conditioning systems are being replaced by electric air conditioning. Generally speaking, when conversions are made, it has been my experience that building owners opt for the more energy-efficient equipment available. Yet, the CACS program precludes recommendations for fuel switching, even though fuel switching may well have a far better payback than all of the other measures combined.

This situation creates another interesting dilemma. Can you see electric companies recommending conversions from electric to gas heat for their customers, or can you see gas companies recommending the use of heat pumps to their audit customers?

Auditor Competence

While the construction methods and materials used in single-family housing ar relatively few and uniform, the world of commercial and multi-family buildings is comprised of a virtually unlimited variety of construction methods and materials. While it may be feasible to train energy auditors for residential buildings in a few days, such is not the case for commercial and multi-family buildings. Energy auditors must be capable of identifying and understanding the many types of equipment and systems utilized in these buildings, as well as being competent in the techniques and costs involved to make them more efficient. Generally, this expertise takes months and years to acquire. In addition, many more state and local building codes and standards are applicable to covered buildings, especially with respect to protecting the public health and safety. Auditors must be skilled in understanding the requirements and implications of these codes and standards, especially to preclude incurring potential liability.

Therefore, the training and experience necessary for auditors under the CACS program is considerably different from that required under RCS. People with these skills are already employed in private, taxpaying businesses or they must be trained at great expense. Since utility companies may not be in a position to offer long-range employment to these people, if they don't contract for the service, they will either have to go to extraordinarily great expense to train them or pirate them from other firms who are already doing this type of work. "One-day wonders" just cannot provide competent audit services.

The hazards of having incompetent auditors are many. As one example, an auditor recommended a reduction in the quantity of ventilation used in a local school, which was accomplished by closing the outdoor air dampers in classroom unit ventilators and closing dampers in attic vents. As a result, the moisture build-up from the students raised the humidity high enough to cause the wood roof deck to warp, resulting in a brand new slate roof being destroyed. The cost of repairing the roof ~~will~~ be about 100 times the annual energy cost savings recommended by this auditor.

This is just one of many situations that are just coming to light, where well-intentioned energy conservation modifications have resulted in damage or destruction to the building. It often takes several years for these consequences to become evident, and several more years before the damages are repaired and/or litigation is begun, so that the public is able to obtain an awareness of what has happened.

It is not very likely that the above problem would have even existed, had the audit been accomplished by a technically competent person. Were such an error committed by a private business, either it or its liability insurance carrier would be financially responsible for its actions. Such is not likely to be the case when measures required by law or regulation are implemented. To whom does the building owner turn for a remedy?

CONCLUSION

Progress is being made in reducing energy consumption at an increasingly faster rate without CACS. Adequate incentives for energy conservation in the commercial and multi-family building sector already exist in the form of monthly utility bills. Every time there is a rate increase or a month with unusually severe weather, the utility bills become even higher, increasing the incentive.

Competent advice to owners and occupants of commercial and multi-family buildings is readily available from many types of taxpaying businesses in the free enterprise system. The cost to all utility taxpayers and the potential problems with CACS far outweigh any anticipated benefits. The American Consulting Engineers Council urges Congress to repeal the CACS law, so that the best interests of building owners can be achieved in the competitive marketplace under the free enterprise system.

Senator EVANS. Thank you, Mr. Spielvogel.

Next, Mr. Hughes.

Mr. HUGHES. Thank you, Senator Evans.

Senator EVANS. I will continue to ask if we can summarize. We still have another panel beyond this one.

STATEMENT OF NORMAN R. HUGHES, N.R. HUGHES & ASSOCIATES

Mr. HUGHES. OK. I have served on both sides of this issue, both in the public sector as the Assistant Secretary for Conservation and Renewable Energy at DOE, and the private sector as a small businessman offering design/build consultation, including energy measures and cost-benefit analysis. I'd like to comment briefly in both roles.

The CACS RIA, the regulatory impact analysis, and final rule was based on some assumptions that we clearly feel is inappropriate, given information then and now available. For example, they assume there is no inflation rate and the cost of energy would increase at the rate of 2.6 percent a year. They assume there would be only a 20-percent overhead cost and the average life of adopted measures and practices was 20 years and that no continuing expense for maintenance or replacement would be necessary during this 20-year period of time.

The same regulators, looking at the same issues, assumed lives of 12 years under the RCS Program. The participation rates, audit costs for each type of audit, adoption rates of measures, average cost of measures, and energy savings and measures and practices adopted as a result of the audits were also all assumed and given values which cannot be supported, in my opinion, by available information.

Therefore, of course, the RCS—I'm sorry, the CACS provision overestimates, I think, the benefits and underestimates the cost. The cost of the program, for example, by the regulatory impact analysis' own estimate, will be 8.7 times the cost of the labor and materials that will actually be installed as a result of the program.

To show how small the energy savings would be, if 100 percent of all the eligible participants under the CACS Program were to participate, and if they were to achieve dreamable proportions of 25 percent energy savings as a result of that effort, the CACS Program would save less than 2 percent of the energy used in commercial and apartment buildings in this Nation, and approximately six one-thousandths of the Nation's total energy use. There is just very little potential for a national program in this type of building.

The participation rates under the regulatory act, the RCS Program anticipated 7 percent participation and resulted in 1.7 percent. The CACS Program anticipated 3 percent and, in my estimate, it should be able to achieve less than 1 percent.

The program that Senator Evans spoke about earlier had a 25-percent penetration rate in 6 years' time, which is about 4 percent a year. If the measures were to average a life of 20 years—which I think is high—they would, of course, quit having their effect before all the buildings would be audited under that program.

Energy savings based upon the RCS evaluation would indicate that less than 1 percent participation at less than a 3-percent differential savings would generate 374,000—374,000 million Btu's a year, which is equivalent to 69,900 barrels of oil and in actual barrels it would be 23,300. By way of imported oil, that would displace 9,800 barrels of imported oil and 2,300 barrels of Arab/OPEC oil.

I hope you are getting the idea that there isn't very much energy savings available. In fact, the bottom line of the CACS Program is that it would have to save 714 times the optimistic projections of the regulators in order to reduce energy consumption of this Nation by 1 percent.

Costs are pegged at $31 million. The benefits are expected to receive about $6 to $9 million a year, so the benefit-cost ratio is 0.2 to 0.3. That is, three to five times the amount of benefits would be spent in cost to achieve the savings in this program.

There are exceptional code and ordinance provisions now in the design-build industry that include a number of provisions for energy regulations. As an example, a church we recently designed and built required 17 pages of energy calculations. A small factory we are now building had 10 pages of envelope calculations, 6 pages of lighting calculations, and more calculations for heating and electrical requirements.

I want to give an example of how, as Larry was saying, the proper qualifications for somebody to provide these audits takes more than the few months that might be provided for an auditor under a utility program. In fact, it takes years of technical education and experience. Cookbook recipes will not work and actually, I feel, provide a disservice.

As an example, a medical care facility that we were in the process of project managing a few years ago discovered by accident that if we used less efficient windows we could get one air change an hour through the windows, which was the code requirement for that type of a building, and by doing so we were able to lower the entire building 16 inches.

And if you can imagine the amount of energy savings, just embedded energy, in materials saved, the costs of processing and mining that material, getting it to the site and putting it into place clearly indicates that the kind of normal cookbook recipes under the CACS Program, which would have anticipated using a more efficient window, would have actually cost quite a bit more energy.

My company is now setting up an energy audit program. We are working with one church group that has indicated they will commit several hundred thousand dollars for improving energy efficiencies of their churches, particularly for inner-city churches, which are facing disbandonment if operating budgets are not reduced.

I feel it is inappropriate and certainly not a high national priority for some of my tax dollars and utility payments to be used against me through unfair competition by the Department of Energy, the State energy office, the public service commission, and utility companies.

In summary, the CACS Program offers very little energy savings potential, at least on a national policy basis. There are several existing programs now in place to require the design-build industry to consider and put into place energy efficiencies. There are many firms, such as ours, Mr. Spielvogel's, storm window insulation, and furnace supply companies advertising in the Yellow Pages, in the newspapers and in magazines trying to bring the attention of these owners and in fact knocking on their doors trying to get them to make more energy efficient decisions.

It is my opinion that many of these decisions are being made and that the business owners who own these commercial and apartment buildings that are eligible for the CACS Program are making cost-effective changes when it doesn't have a counter effect on the operation and function of their business.

I think it is time to look at the intent of Congress in establishing the CACS Program, which was to encourage more cost-effective energy investments. I don't believe that this program does that and I think that repeal of the program will allow more businesses such as ours to participate more avidly in reducing the energy consumption in commercial and apartment buildings.

Thank you.

[The prepared statement of Mr. Hughes follows:]

Testimony of

NORMAN R. HUGHES
N.R. HUGHES & ASSOCIATES
METAMORA, MICHIGAN 48455

TO THE UNITED STATES SENATE

FOR THE HEARING ON
MAY 6, 1985

BEFORE

THE SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

Mr. Chairman and Members of the Subcommittee:

I welcome this opportunity to provide some thoughts to you on the Commercial and Apartment Conservation Service Program (CACS) as mandated by Congress by Title VII of the National Energy Conservation Policy Act (NECPA), (P.L. 95-619) as amended by the Energy Security Act (P.L. 96-294) enacted June 30, 1980 and as implemented by the U.S. Department of Energy.

The intent of Congress in establishing the CACS program was to encourage more cost-effective energy investments through utility energy audit services. Title VII of NECPA requires covered utilities to offer on-site energy audits of small commercial buildings and apartment buildings. The final CACS regulations were issued on October 26, 1983.

My experience with this program bridges both the private and public sectors. During the period from June 6, 1982 through January 5, 1984 I served as Assistant to the Assistant Secretary for Conservation and Renewable Energy at the U.S. Department of Energy. From August, 1972 until that time, and since returning to the private sector in July, 1984, I have managed a small design/build and construction management business located in a semi-rural part of the state of Michigan approximately 50 miles North of Detroit.

Among the assignments entrusted to me by the Assistant Secretary while at DOE was the responsibility to perform a thorough review of all the programs administered by the Office of Buildings Energy Research and Development, including the Residential Conservation Service (RCS) and the CACS program. I was further assigned to head a team that conducted a very comprehensive evaluation of the RCS program. As an incremental part of these assignments I made an in-depth study of the CACS program, including analyses of the enacting legislation, the Final Environmental Impact Statement (CACS/EIS), the Regulatory Impact Analysis (CACS/RIA) and the proposed Final Rule. Additionally, I prepared for the Office of the Under Secretary and for the RCS Evaluation Report a comprehensive projection of anticipated energy savings and cost effectiveness of the CACS program. I would like to provide for you some of my findings in these areas.

I would also like to relate to you some of my experiences as a practitioner in the design/build industry. Using my degree in architecture, studies and extensive experience in metallurgy and mechanical engineering, and construction management consultation on a wide variety of residential, commercial, industrial, religious and ~~industrial~~ institutional buildings, I have performed energy cost/benefit analyses on nearly every project since forming my company in 1972.

CRITIQUE OF CACS/RIA AND FINAL RULE

The Final Regulatory Impact Analysis, as required by E.O. 12291, had a significant effect on the Final Rule for the CACS program. As an example, the CACS/RIA resulted in a revision of the Final Rule to require Walk-Through Audits with Analysis (WTA) as opposed to Detailed Audits (DA) as required in the 1981 proposed rule, or Walk-Through (WT) audits as recommended by some private sector energy experts.

While less expensive than Detailed Audits, WTA audits are more expensive than Walk-Through audits. They require more time and expense with no proven increase in accuracy, and no documented improvement in energy savings or adoption of conservation measures by auditees.

The CACS/RIA was based upon a large number of very key assumptions. We in the private sector call them "WAGS" when based on data no more conclusive than that documented in the RIA.

As an example, the RIA assumed there would be no inflation rate, that energy costs would escallate at a rate of 2.6% a year greater than inflation, that there would be only a 20% program overhead cost, that the costs for program announcements would only be $ 0.20 each, that the same number of Federal Government employees and Federal Government contract employees would participate in the program regardless of the participation rates or type of program finally adopted, and that a discount rate of 10% should be used over the 6 year projected life of the program.

A very key assumption made was that the average life of adopted procedures and measures was 20 years, and that no continuing expense for maintenance or replacement would be necessary during this 20 year period to assure continued 100% efficiency of the estimated energy savings value of each adopted measure or practice. This assumption was retained even though the same drafters estimated the life of some of the same measures in the RCS/RIA as having a life of 12 years!

I believe equally invalid "WAGS" were made in the assumptions of audit participation rates, audit costs for each type of audit, adoption rates of measures, average costs of measures, and energy savings of measures and practices adopted as a result of each type of audit. These were all given assumed values as constants!

As you can imagine, if you assume that three times as many measures will be adopted and save four times as much energy if Detailed Audits are conducted rather than Walk-Through Audits, the calculations for energy savings will be skewed towards adopting the more expensive and time consuming audit. Likewise, if you assume that overhead cost are the same regardless of the participation rate, length of time to implement audits or install measures, the cost side of cost/benefit calculations can be affected. The recommendations of the CACS/RIA and the resulting Final Rule have been based upon such assumptions. In the case or the CACS/RIA and Final Rule, parameter values were assumed ignoring conflicting data available from the results of the RCS and other programs conducted by DOE, numerous utilities and private sector audit programs. As an example, the Florida Power and Light Company has offered both Detailed and Walk-Through RCS audits. They found that a Walk-Through audit achieved 85% of the savings of the Detailed audit at 80% of the reprofit cost and 50% of program cost to the Utility.

I believe that, if more appropriate values were assumed for the parameters or constants plugged into the calculations upon WHICH recommendations were based, all concientous and honest personnel connected with the program would have concluded that Congress must be convinced to repeal CACS. At the very least, the Final Rule would permit Walk-Through audits or would have permitted states and utilities to eliminate audits altogether if they could exhibit that energy use evaluations were available in the appropriate areas from competent companies or personnel in the private sector.

Even in its most optimistic protrayal of the potential of the CACS program, the CACS/RIA nonetheless afforded us some interesting glimpses into some of the most significant drawbacks of the program:

- o Auditors for CACS will require at least two weeks more training than RCS auditors.

- Utilities will spend six times as much on the CACS program as the customers will actually spend on retrofit measures! The costs to state governments will be greater than customers will spend on retrofit measures. The costs to the Federal government will be nearly one half that spent by consumers on retrofit. In other words, THE COSTS OF THE CACS PROGRAM WILL BE 8.7 TIMES THE COSTS FOR LABOR AND MATERIALS TO BE ACTUALLY INSTALLED BY CUSTOMERS AS A RESULT OF THE RECOMMENDATIONS OF THE CACS PROGRAM!
- The CACS/RIA states that there is a tendency in their assumptions to overstate coverage. Under the recommended WTA audits, the RIA estimated that there would be a 3% annual participation rate. The RCS program has had a participation rate of 1.7% per year.
- The CACS/RIA states that their estimates "...do not constitute a complete accounting of costs and benefits." I agree. I believe the benefits are greatly overestimated, and that costs may well be underestimated. Some energy savings information for the CACS/RIA was borrowed from the RCS/RIA, which was in error by factors of 6 or more in predicting energy savings.
- While admitting that secondary impacts may result from the Final Rule, a decision was made to not perform an analysis in compliance with the Regulatory Flexibility Act which was designed to protect small business from undue government competition.
- Benefit/Cost analyses were not made for included measures, i.e., There was no study done to assure that all included measures were cost beneficial. Rather, a study was done just to verify that those measures that were excluded were done so properly. As a result, it is possible that some measures that are not cost effective must still be considered in CACS audits.

Having been at DOE during the time the CACS Final Rule was issued, I believe that political pressure forced the premature issuance of this regulation even though it was known there were several very serious flaws. Fully recognizing the need to fulfill Congressional mandates, the CACS Final

Rule should have been further re-accessed in light of Executive Order 12291 which states in part: "Regulatory action shall not be taken unless the potential benefits to society for regulation outweigh the potential costs to society."

As will be clearly illustrated in the next two sections, there will be very small energy savings achieved by CACS, and the benefits to society clearly will be greatly outweighed by the costs to society.

CACS ENERGY SAVINGS

According to the CACS/RIA the program can potentially serve 2,328,000 buildings using a total of 1.048 Quads of energy. This equates to approximately 174.7 million barrels of oil. Since these building types consume approximately 1/3rd of their energy in the form of oil, the actual oil consumed is approximately 58.2 million barrels. In terms of imported oil, I estimate approximately 12.8 million barrels are consumed in these buildings.

I think it is important when considering the future of the CACS program to look at how small the potential for energy savings is even if they were to achieve success greater than any of our wildest dreams. For example:

- o IF 100% PARTICIPATION TOOK PLACE AND EACH AND EVERY BUILDING REDUCED ENERGY CONSUMPTION BY 25%, THE CACS PROGRAM WOULD SAVE LESS THAN 2% OF THE ENERGY CONSUMED BY THE NATION'S RESIDENTIAL AND COMMERCIAL BUILDINGS, AND APPROXIMATELY SIX THOUSANDTHS OF THE NATION'S TOTAL ENERGY USE.
- O IF 100% OF CACS ELIGIBLE COMMERCIAL BUILDINGS have audits and SAVE AN AVERAGE OF 10% of their energy use as a result of actions taken in response to the audits, the total energy SAVINGS PER YEAR WOULD BE 41 Trillion BTU's or 68 Million BOEs, merely 0.75% OF THE TOTAL COMMERCIAL BUILDINGS ENERGY USE PER YEAR!! The CACS eligible Commercial buildings consist of just over 50% of all commercial buildings, but they use less than 7.5% of the total commercial buildings energy consumption.

Miss Fitzpatrick bases her energy savings extimates on an annual participation rate of 5%. The CACS/RIA projected participation rates of 3%.

The RCS audit proram has achieved annual participation rates of approximately 1.7% There were at least 18 utility and state programs for these types of buildings existing before implementation of CACS. There are also a large number of private sector firms offering audits and other energy analyses for building of this size and type. As a result, I believe a more accurate estimate of the participation rate is in the neighborhood of 1% per year.

The CACS/RIA assumed energy savings for WTA audits of 10% for measures and 8% for procedures, for a composite of approximately 9%. The RIA assumes that 45% of the participants will install program measures or adopt energy savings procedures as a result of the CACS program. (The CACS/EIS states 20% will adopt measures.) Projected into energy savings, the CACS/RIA states that net or incremental energy savings will be equivalent to 962,013 million BTU's per year, or 197,681 BOE's; 65,894 barrels of oil would be saved. THESE SAVINGS TRANSLATE INTO LESS THAN FOUR THOUSANDTHS OF ONE PERCENT OF THE NATION'S APARTMENT AND COMMERCIAL BUILDINGS ENERGY USE, AND LESS THAN TWO THOUSANDTHS OF ONE PERCENT (0.0014%) OF THE NATION'S TOTAL ENERGY USE. THE OIL SAVINGS WOULD REPRESENT APPROXIMATELY ONE THOUSANDTH OF ONE PERCENT (0.0012%) OF THE NATION'S ANNUAL OIL CONSUMPTION.

I feel these are optimistic anticipations based on the success of the RCS program, and data available on the building types covered by CACS and the energy savings that have already been achieved. Some of the factors reducing this potential savings include:

- o Several states, utilities and private sector firms have already audited and provided consulation on the eligible buildings.
- o The CACS/RIA buildings and energy use totals include Federal government buildings which are not eligible for the program. Many of these have already been audited and retrofitted under the Federal Energy Management Program.
- o Most of the eligible apartment buildings have shared walls between units, reducing the potential for envelope energy efficiency improvements. Further, if the buildings are centrally metered there is little incentive for individual unit occupants to make energy conservation investments. If they are not centrally metered, the building owner is likely passing on energy costs to occupants, and has little incentive

for major retrofit improvements.

- Small commercial buildings likewise are frequently occupied by leasees, share common walls, and have some energy costs reflected in leases.
- There are other operation requirements that countermand some of the potential for energy savings. The measures the EIS anticipates will be adopted most frequently by commercial building owners is revisions of lighting. However, it is my experience that commercial clients will not reduce light levels where they feel it will adversely affect operation efficiency, will diminish the attractiveness of materials on display for sale, will decrease advertising or will result in violations of building codes or increase liability by posing hazards to employees or visitors.
- There are code restriction on air changes required in commercial and residential buildings. These can range from 0.1 air change per hour to more than 30, depending on buldings type and usage. It makes little sense to add caulking, insulation, storm windows and other measures in a building if the increased envelope tightness results in the need to add additional ventilation to assure code and public health requirements. Adding forced ventilation, make-up air units, and heating or cooling elements to temper the fresh air intake can cost more energy than is saved in the envelope revisions.

The mean value of differential energy savings in programs similar to CACS has been approximately 4.5%. The RCS differential energy savings are 2.1%.

The RCS evaluation projected CACS energy savings, based on RCS results (1.7% participation, 2.7% differential energy savings), as follows:

	Apartments	Commercial	Totals
No. of Units (Millions)	7.1	2.0	9.1
Units audited per year	120,700	34,000	154,700
Energy Consumed per Unit-MBtu	90	204.5	115 avg.
Energy Consumed-Participants	10,863,000 Mbtu	6,953,000	17,816,000
Energy Saved per Unit-MBtu	1.9	4.3	2.4 avg.
Energy Saved All Participants	228,000 Mbtu	146,000	374,000

BOE Saved	42,600	27,300	69,900
Barrels of Oil Saved	14,200	9,100	23,300

This calculates to be 9,800 barrels of imported oil saved per year. This equates to approximately 2,000 barrels oof Arab/OPEC oil per year! Even this number may be optimistic, since energy savings extrapolated from fuel bill data would reduce the calculated energy savings used in the RCS evaluation by an additional 20%.

The bottom line is that the CACS program will have to save 714 times the optimistic projections of the CACS/RIA, to reduce the Nation's energy consumption by 1%!

THE KEY QUESTION IS, SHOULD THERE BE A FEDERAL PROGRAM, WITH A FEDERAL REGULATION, ADMINISTERED BY A FEDERAL STAFF, WITH FEDERAL CONTRACT EMPLOYEES, REQUIRING PLANS AND IMPLEMENTATION BY STATES AND REQUIRING UTILITIES TO EMPLOY, TRAIN, AND MANAGE AUDITORS, ALL SUPERVISED BY THE U.S. SENATE AND U.S. HOUSE OF REPRESENTATIVES FOR A PROGRAM THAT CAN SAVE SO LITTLE ENERGY?

CACS BENEFIT/COST ANALYSIS

The CACS/RIA assumes that the adoption rate for practices is 60%, and for measures, 20%. It further assumes that the percentage of total energy use the average unit adopting practices saves is 10%, and for measures, 8%. As a percentage of total energy use, practices would save 2.2% and measures 0.9%, for an aggregate of 3.1% differential energy savings for CACS participants compared to all CACS eligible consumers. With the CACS/RIA projected participation rate, the annual resultant savings will be 0.09% of the energy used by eligible CACS consumers. All CACS eligible consumers use 7.49% of all residential and commercial buildings energy. This equates to 0.006% of the total residential and commercial buildings energy use, and 0.002% of the total National energy use. While these figures, if actually achieved, would be 2.6 times as successful as the RCS program has been, the total energy savings is only 9.5% of that achieved in the RCS program, since the total energy used by the CACS eligible buildings is so small.

The CACS/RIA projects audit costs for apartments of $ 300.00 per building with no expenditure for practices and $ 1,000 invested in measures per building. It projects audit costs for commercial buildings at $ 200.00 per building with no cost for practices and $ 500.00 per building for measures.

The total annual program costs are projected at:

o	Utilities	$ 22,388.000
o	Customer Costs (Retrofit Expenses)	3,585.600
o	States Costs	3,680,000
o	Federal Government Costs	1,500,000
		===========
	TOTAL ANNUAL COSTS	$ 31,073,599

Please note that retrofit expenses represent only 12% of the projected program costs, compared to 62% for the RCS program.

The small investment in material and labor supports the CACS/RIA projections that 71% of the anticipated energy savings would result from practices, rather than measures. Practices usually represent occupant behavioral modifications and frequent maintenance of equipment, both requiring constant monitoring and follow-up. This does not occur without costs! At $ 1,000 per building, apartment investments would average $ 46.00 per unit. CACS, therefore, would have to become an educational program to induce participants to make low-cost/no-cost revisions such as lowering thermostats, installing restrictors in water supplies, lowering light levels, etc.

RCS evaluation results, projected to the CACS program, would result in smaller energy savings (374,000 Mbtu/yr., 39% of CACS/RIA) and higher costs than those projected in the CACS/RIA.

CACS WOULD COST 23% AS MUCH TO IMPLEMENT AS RCS, AND SAVE 9.5% AS MUCH ENERGY, WITH A NET BENEFIT/COST RATIO OF 0.41X THAT FOR RCS. Excluding retrofit costs, the benefit/cost ratio of CACS compared to RCS is 0.23X. RCS Benefit/Cost ratios were evaluated at ranging from 0.4 to 0.7.

THE CACS BENEFIT/COST RATIO, THEREFORE, IS LIKELY TO BE 0.2 TO 0.3!

While the CACS program may attract a small percentage of eligible participants, and these participants may save some small additional margin of energy, the costs to society for these achievements are likely to be 3 to 5 times the benefits.

REFLECTIONS ON CACS BASED UPON MY PRIVATE SECTOR EXPERIENCES

The Federal, state and local codes and ordinances being placed on the design/build industry is becoming more and more restrictive each year. Let me offer some examples:

- I am currently building a custom residence for a friend in a small Detroit suburban city. The building inspector operates a heating and cooling business on the side. In Michigan, the legislature gave all local governmental units a limited time to adopted a comprehensive building code. Those who did not do so within that time were forced to accept the BOCA code. This inspector is insisting on five different permits and 22 inspections. There are two additional county government permits and three inspections required. Partial and interim inspections are expected for some of the trades. Each permit requires a fee. In this case, we have a registered architect, a professional engineer, a construction manager with experience on projects valued in excess of $ 350 million, and a client who is an engineer with previous projects experience and demanding standards of quality. We are all subject to the opinions, whims, prejudices and preferences of a building inspector who is experienced and trained in only two trades, which he cannot inspect because of potential conflicts of interest.
- A civil engineer with 40 years of professional experience as a professional planner and surveyor and several commendations from his profession accompanied me to a meeting with a young employee in the planning department of another city. We stood there in amazement and disbelief as he proceeded to tell us that with all his "expertise" he felt we should totally change the traffic patterns and building layout of our industrial project, after an analysis period of less than 15 minutes. Sadly, he had the authority to require us to make some of these changes, and did so.
- To get a site development permit for some communities it is necessary to have plans reviewed by four or more departments in the city, plus approvals from the county, the city of Detroit (if Detroit water mains are near the site) and the

state of Michigan. Some building types require approvals from three or more state agencies. It is not unusual to have a landscape plan approval, with restrictions as to quantity, size, species and planting techniques for trees, shrubs and grasses before any construction can start.

- Several Federal codes must be met. Certificates of need for medical care facilities are restricted by state implementation of Federal rules. Size restrictions alone, have increased costs by more than 50% over a ten year period. State Fire Marshall Rules are referenced back to National Fire Protection Association guidelines that are developed in partnership with the Federal government. Use of materials are reviewed by rulings made by EPA and the Consumer Product Safety Commission as well as several private sector materials and trades associations. Barrier-free compliance is dictated by Federal rule in response to Congressional mandates.
- Additionally, projects that are financed or that have mortgages that may eventually be sold to a Federally guaranteed secondary mortgagor sponsored by one of several agencies or departments, are subject to the numerous rules and standards of those organizations.

I mention these to bring to your attention the restriction on the design freedom of concientious and experienced professionals in the private sector, at the hand of the public sector at numerous levels of government.

I feel this is important as your consider the possible repeal of th legislation mandating CACS because all buildings designed and built or being given major remodelling are also subject to numerous other energy regulations.

In recent years approximately 80% of all residential units, including multiple-unit buildings eligible for the CACS programs have been built to the energy guidelines of one of the major Federal secondary mortgage institutions, such as the HUD, FMHA, FHA or VA minimum property standards.

Commercial and industrial buildings have been designed and built to the requirements of numerous national code organizations, such as the Building Officials and Code Administrators (B.O.C.A.), Uniform Building Code, Southern Building Code, and several other state and local codes. All of the codes I am aware of have energy elements. The BOCA code is based on ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) standards guidelines, which have been developed in part through Department of Energy grants, research programs and the participation of Federal government and government contract personnel. In fact, the immediate-past President of ASHRAE was an employee of the National Bureau of Standards who has participated in several DOE sponsored research projects. The National Electrical Code and National Plumbing Code have energy elements. This list could go on for several more pages. This all relates back to small businessmen such as me, and others represented by some of my fellow panellists.

On a recent church addition my firm designed and built, consisting of a new chapel, kitchen, gymnasium, classrooms, nursery and offices (totalling approximately 10,000 square feet), we performed 17 pages of energy calculations. Some of these were required by codes, but as conscientious professionals, we performed these and others to best serve our client's needs, including reducing future energy bills. As part of this building program we added roof insulation to parts of the existing facility, and proposed adding ventilating skylights to the existing sanctuary which uses 26,600 watts of incandescent lighting. This program will result in no more energy usage than the client had before the additional construction.

On an industrial project we are still constructing, we performed 10 pages of envelope calculations, six pages of lighting calculations, and several more on heating, ventilating and air conditioning.

On a project I managed several years ago, in the process of trying to decide if we would use thermal-break windows at a cost increase of several thousands of dollars, it was discovered that we could obtain the one air change per hour required in health-care rooms by infiltration through the less expensive and thermally less efficient windows. By providing heating, ventilating and cooling units under the windows, were were able to temper the infiltrated air at much less energy expense than pushing air through hundreds of feet of ductwork, or pushing hot water through hundreds of feet of pipe, from centrally located units. This permitted us to lower the height of the entire building sixteen inches, the additional space that would have been required for ductwork under a forced air system. In addition to providing the owner preferable interior and exterior aesthetics with this revision, the net energy savings is significant. Consider all the embedded energy costs for mining, processing, shipping, erecting and maintaining all the materials that were saved. Many gallons of gasoline and barrels of oil were saved just in the mileage the workers of several trades avoided in raising the structure higher. A small minority fundamentalist church in Flint, Michigan is saving nearly $ 6,000 per year (half their heating bill) as a result of installing a more efficient heating unit.

THESE ARE ALL EXAMPLES OF ITEMS THAT RESULT IN SIGNIFICANT ENERGY AND/OR DOLLAR SAVINGS FOR OUR CLIENTS, THAT WOULD PROBABLY NOT BE POSSIBLE UNDER THE RESTRICTIONS AND LISTS OF MEASURES INCLUDED IN CACS AUDITS.

I believe that very few, if any, of the utility-trained auditors I have met are able to temper a list of pre-determined measures and practices with the requisite understanding of the client's operational needs and functions, in order to provide them meaningful guidance. They are not able to discuss fuel switching. The tools they have to work with, the fancy computer models available from the national laboratories, have been illustrated to be 50% in error in some instances. Their methodologies do not adequately discount for the diminished effect of subsequent measures. For example, adding twelve inches of roof insulation will not provide twice the energy savings of the first six inches. It is not possible in the real world to save more than 100% of energy use, no matter how many measures or practices are adopted. By over-estimating the benefits to be achieved by some measures, these audit tools are losing credibility, and will surely damage the program and possibly the entire energy conservation industry. Importantly, they may encourage the misuse of our resources by creating inappropriate desire and priority for some commodities and behaviors to the disadvantage of others that can benefit the consumer, society and our nation more.

TO BE PROPERLY QUALIFIED TO GIVE OWNERS EXPERT ADVICE ON HOW TO IMPROVE THE ENERGY EFFICIENCY OF THEIR FACILITIES, WITHOUT UNACCEPTABLE ALTERATIONS TO COMFORT LEVELS, OPERATING EFFICIENCY AND FUNCTION OF THEIR FACILITIES, MORE THAN A FEW WEEKS, MONTHS, AND EVEN YEARS OF TECHNICAL EDUCATION AND EXPERIENCE ARE REQUIRED. "COOK-BOOK" RECIPES WILL NOT WORK, AND ACTUALLY PROVIDE A DISSERVICE.

Finally, following the lead of the highly successful Inter-Faith Coalition program in Philadelphia, I have been working for months to prepare an on-site audit and energy consulting service, and have been working with a major Church group in Michigan to establish a similar program. I believe this one group alone will commit several hundred thousand dollars for improving the energy efficiencies of their churches, particularly for the inner-city congregations who are facing disbandonment if operating budgets are not reduced.

I FEEL IT IS INAPPROPRIATE, AND CERTAINLY NOT A HIGH NATIONAL PRIORITY, FOR SOME OF MY TAX DOLLARS AND UTILITY PAYMENTS TO BE USED AGAINST ME THROUGH UNFAIR COMPETITION BY THE DOE, STATE ENERGY OFFICE, PUBLIC SERVICE COMMISSION AND UTILITY COMPANIES.

IN SUMMARY

CACS offers very little energy savings potential. All eligible building combined, use only about 2% of the Nation's energy each year. Reducing energy consumption in these buildings by 2%, 4%, or even 10% will not contribute greatly to achieving National energy independence. Margins of energy savings achieved in RCS, CACS and similar programs run by the Federal government, states and utilities have shown only marginal improvements in energy savings. There certainly are better targets of opportunity to invest our resources in.

There are several existing Federal, state and local government units, plus code making organizations, standards organizations and financial institutions pushing for and demanding that energy conservation practices and measures are implemented in new and renovated buildings.

There are many firms such as ours, plus architectural, engineering, and furnace, storm window, insulation and other supply and installation firms who are advertising in the papers, magazines and yellow page directories, and knocking on the doors of virtually every business and multiple dwelling unit in persuit of energy conservation as well as more efficient utilization of other aspects of operation and function of this nation's buildings. Owners of CACS eligible buildings have been exposed to several options for energy savings. Several have already taken steps to conserve energy. Others cannot implement some potential energy conservation practices and measures without very negative effects on the function and profitability of their businesses. Owners of small businesses and multiple family dwelling units have made, and will continue to make, cost-beneficial energy savings decisions, even without the assistance of the CACS program, which will reach very few of them.

The CACS program, I believe, will prove to be even less successful than the RCS program has been. Participation will be low and energy savings insignificant on a national policy level.

RCS and CACS legislation and program implementation has occured after the Nations' energy use had peaked. Buildings energy use had already decreased approximately 20% before these programs came into being. Domestic energy supply has increased and the National energy picture has improved significantly.

The intent of Congress in establishing the CACS program was to encourage more cost-effective energy investments. With anticipated costs three to five times the value of benefits, I feel it is clear that the CACS program, even more so than the RCS program, has not and will not fulfill the intent of Congress.

It is time to free the Federal government staff, Federal government contract employees, state government employees and utilities to persue more fruitful ways of meeting our Nation's energy needs.

As a person who has looked at this program form both sides now, I strongly encourage you to repeal the CACS program by passing S.410.

Senator EVANS. Thank you very much.

Mr. McDonald.

STATEMENT OF NORRIS McDONALD, DIRECTOR, CONSERVATION AND TRANSPORTATION PROJECT, ENVIRONMENTAL POLICY INSTITUTE, ON BEHALF OF THE ENERGY CONSERVATION COALITION

Mr. McDONALD. Mr. Chairman and members of the committee, my name is Norris McDonald and I am director of the energy conservation and transportation project at the Environmental Policy Institute. I appreciate the opportunity to appear before you today on behalf of the aforementioned members of the Energy Conservation Coalition to discuss the future of the Commercial and Apartment Conservation Service Program.

The Energy Conservation Coalition is a nonpartisan, nonprofit alliance of public interest organizations formed to publicize and promote energy conservation. The Energy Conservation Coalition strongly opposes repealing the Commercial and Apartment Conservation Service Program. ECC believes that the Commercial and Apartment Conservation Service Program represents one of our Nation's most important strategies for implementing energy efficient retrofits in multifamily housing and commercial buildings.

The CACS Program is especially important in achieving significant levels of energy conservation in multifamily rental housing. The federally mandated CACS Program provides our Nation with a comprehensive approach to achieving energy efficient retrofits in multifamily housing. The problem of implementing energy conservation measures in multifamily housing has been one of the least solvable in the energy conservation field.

A labyrinth of constraints have blocked the efforts of landlords and tenants to conserve energy in this sector. Utilities, in cooperation with other energy management companies, are ideally situated to provide the efficiency services needed by landlords, tenants, and dwelling unit owners of multifamily housing.

The uniform design of the program at the Federal level is important for attaining the national goal of reducing the growth of demand for energy. The CACS Program will ensure that building tenants and owners are at least provided with information concerning the energy use and energy efficiency potential of their buildings. The program will also assist them in implementing the recommended measures and operating and maintenance procedures.

Clearly the need exists for this service nationwide. According to EPI research, rental apartments account for about one-third of total residential energy use, or about 7 percent of all energy use in the United States. The average annual energy use in a multifamily apartment unit is almost 100 million Btu's or about 16 barrels of oil equivalent per unit.

Energy in apartments is used primarily for space heating and domestic water heating. Space heating accounts for approximately 50 percent of total apartment energy use and water heating accounts for another 30 percent of total consumption. The remaining 20 percent is used for appliances basically.

Natural gas and fuel oil account for over 80 percent of all apartment energy consumption, and over 90 percent of the energy is used for space and water heating. Oil and gas are used in roughly similar amounts, with oil predominantly used in the Northeast, while gas is used most in the North, Central, and other regions. Electricity consumption, which is about 20 percent of total apartment energy consumption, is the highest in the South.

Approximately 55 percent of the multifamily units in the United States are occupied by low-income households. Approximately 86 percent of all multifamily housing is rental, with the remainder being condominium and cooperative units. Approximately 82 percent of all rental units are in urban areas.

According to Department of Energy estimates, energy consumption in existing apartments could potentially be reduced by as much as 40 percent through the application of appropriate structural and energy control measures. A 40-percent reduction in energy consumption would equal more than six barrels per unit per year of oil equivalent or the equivalent of 85 million barrels per year for 14 million multifamily apartment units. This reduction represents a savings greater than the daily fill rate of the strategic petroleum reserve.

Although we do not expect the CACS Program alone to achieve a 40-percent reduction in energy consumption, its successful implementation could significantly contribute to the attainment of this goal. Successful implementation of the CACS Program could significantly increase the percentage of energy savings in multifamily rental housing.

The marketplace will not take multifamily or commercial buildings to significant levels of energy efficiency. The traditional constraints to achieving energy conservation in multifamily rental apartments will remain in place. These include owner/tenant conflicts, capital constraints, and the complexity of retrofit technology. Absent a CACS Program, these constraints could cause landlords to continue the traditional practice of only passing the cost of energy on to the tenants.

Again, the energy conservation coalition opposes S. 410 to repeal the CACS Program. We agree with Senator Johnston's statement accompanying the bill, which notes that "this review may produce ideas for legislation different from my bill. We may decide to leave things just as they are."

ECC agrees that the CACS Program should be left in place, that it can be implemented without a shroud of uncertainty and evaluated as to its effectiveness. We welcome the spirit of review, but we suggest that it take the form of, one, correctly performed process evaluations to improve program cost effectiveness in order to give the program a chance to work and, two, correctly performed impact evaluations to assess cost effectiveness after implementation.

The marketplace alone will not achieve significant levels of energy efficiency. We believe that a strong and aggressively implemented Federal CACS Program is needed to assist States and utilities in implementing successful multifamily building energy efficiency audits and retrofits. The members of the ECC will continue to support the CACS Program and we are ready to assist DOE, States, utilities, and citizens in assuring that this effort is successful.

Thank you.

[The prepared statement of Mr. McDonald follows:]

TESTIMONY OF

NORRIS McDONALD

DIRECTOR, ENERGY CONSERVATION AND TRANSPORTATION PROJECT

OF THE

ENVIRONMENTAL POLICY INSTITUTE

BEFORE THE

SUBCOMMITTEE ON ENERGY CONSERVATION AND REGULATION

OF THE

SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

ON THE PROPOSED REPEAL OF THE

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS) PROGRAM

ON BEHALF OF THE THE FOLLOWING MEMBERS OF THE

ENERGY CONSERVATION COALITION

PUBLIC CITIZEN

SIERRA CLUB

FRIENDS OF THE EARTH

NATIONAL CONSUMERS LEAGUE

THE CONSERVATION FOUNDATION

NATURAL RESOURCES DEFENSE COUNCIL

UNION OF CONCERNED SCIENTISTS

ENVIRONMENTAL ACTION

NATIONAL AUDUBON SOCIETY

NATIONAL WILDLIFE FEDERATION

SOLAR LOBBY

UNITED METHODIST CHURCH-
BOARD OF CHURCH & SOCIETY

Mr. Chairman and members of the Committee, my name is Norris McDonald and I am Director of the Energy Conservation and Transportation Project at the Environmental Policy Institute (EPI). I appreciate the opportunity to appear before you today on behalf of the aforementioned members of the Energy Conservation Coalition (ECC) to discuss the future of the Commercial and Apartment Conservation Service (CACS) Program. The Energy Conservation Coalition is a nonpartisan, nonprofit alliance of public interest organizations formed to publicize and promote energy conservation. The organizations serving on its Board represent over sixteen million members.

The Energy Conservation Coalition strongly opposes repealing the Commercial and Apartment Conservation Service Program. ECC believes that the CACS Program represents one of our nation's most important strategies for implementing energy efficiency retrofits in multifamily housing and commercial buildings. The CACS Program is especially important in achieving significant levels of energy conservation in multifamily rental housing.

INTRODUCTION

The federally mandated CACS Program provides our nation with a comprehensive approach to achieving energy efficiency retrofi in multifamily (rental) housing. The problem of implementing energy conservation measures in multifamily housing has been one of the least soluble in the energy conservation field. A labyrinth of constraints have blocked the efforts of landlords, and tenants to conserve energy in this sector. Utilities, in cooperation with other energy management companies, are ideally situated to provide the efficiency services needed by landlords, tenants and dwelling unit owners of multifamily housing.

The uniform design of the Program at the federal level is important for attaining the national goal of reducing the growth of demand for energy. The CACS Program will ensure that building tenants and owners are at least provided with information concerning the energy use and energy efficiency potential of their buildings. The Program will also assist them in implementing the recommended measures and operating and maintenance procedures. Clearly, the need exists for this service nationwide.

The CACS Program was mandated by Title VII of the National Energy Conservation Policy Act (NECPA), P.L. 95-619, as amended by the Energy Security Act, P.L. 96-294. Title VII of NECPA requires any large investor-owned or municipal utility that sells 10 billion cubic feet of natural gas or 750 million kilowatt hours of electricity per year to offer energy audits to eligible small commercial buildings and larger, multifamily (more than five units) apartment buildings, which are centrally heated or cooled. Commercial buildings eligible for the program cannot exceed monthly energy use of 4,000 kWh of electricity, 1000 therms of natural gas, or 100 MMBtu of any other fuel. There is a maximum $15 per dwelling unit charge (or the actual cost of the energy audit, whichever is less) for multifamily building audits and there is no limit for commercial buildings.

Legislation (S. 410) has been introduced in the Senate to repeal the CACS Program. Two bills have been introduced in the House (H.R. 929, H.R. 969) to repeal both the CACS and Residential Conservation Service (RCS) Programs. The RCS Program requires covered utilities to offer audits to residential customers in one to four dwelling units and to multifamily buildings which are individually heated or cooled. The RCS Program requires covered utilities to send announcements to their customers every two years informing them of the program. This requirement was terminated on January 1, 1985. However, there is no termination date for the RCS Program itself. The CACS Program is scheduled for implementation between 1985 and January 1, 1990. The CACS Program would not have a chance to prove itself if it is repealed this year.

Clearly, the CACS Program should be given the opportunity to prove that it can achieve a significant level of energy efficiency improvements. The marketplace has had years and two energy crises to work its magic, but the covered facilities are still largely energy inefficient.

Apartment Energy Use

According to EPI research, rental apartments account for about one-third (5 quads) of total residential energy use (16 quads), or about 7 percent of all energy use in the U.S. The average annual energy use in a multifamily apartment unit is almost 100 million Btu, or about 16 barrels of oil equivalent per unit. Energy in apartments is used primarily for space heating and domestic water heating. Space heating alone accounts for approximately 50 percent of total energy use. Water heating represents another 30 percent of total consumption. The remaining 20 percent is used for cooking, refrigeration, clothes drying, lighting, cooling and other appliances.

Natural gas and fuel oil account for over 80 percent of all apartment energy consumption, and over 90 percent of the energy used for space and water heating. Oil and gas are used in roughly similar amounts, with oil predominantly used in the Northeast, while gas is used most in the North Central and other regions. The predominant use of oil and gas for heating indicates that most apartment buildings have central fired systems which are therefore master metered. Electricity consumption, which is about 20 percent of total apartment energy consumption, is highest in the South.

Apartment Household Characteristics

Approximately 55 percent of the multifamily unit in the U.S. are occupied by low-income households. Approximately 86 percent of all multifamily housing is rental; with the remainder being condominium and cooperative units. Approximately 82 percent of all rental units are in urban areas.

Low-income households are hit hardest by escalating energy prices. The median income for renters is approximately $9,000, compared to $16,000 for homeowners. Low-income households spend as much as 30 to 40 percent of their incomes for energy. Landlords usually increase the rent to cover additional fuel charges instead of investing in energy efficiency improvements. Tenants rarely have the authority, capital, inclination, or expertise to engage in energy efficiency improvements of their units or buildings.

Apartment Energy Conservation Potential

According to Department of Energy (DOE) estimates, energy consumption in existing apartments could potentially be reduced by as much as 40 percent through the application of appropriate structural and energy control measures. A 40 percent reduction in energy consumption would equal more than six barrels/unit/year of oil equivalent, or the equivalent of 85 million barrels per year year for 14 million multifamily apartment units. This reduction represents a savings greater than the daily fill rate of the Strategic Petroleum Reserve. This reduction would save about $2.4 billion per year in fuel costs. Clearly, world security and America's balance of payments would be well served by this reduction in energy use.

Benefits of the CACS Program

Although we do not expect the CACS Program alone to achieve a 40 percent reduction in energy consumption, its successful implementation could significally contribute to the attainment of this goal. The successful implementation of the CACS Program could significantly increase the percentage of energy savings in multifamily rental housing. The CACS Program is specifically designed for penetration of the multifamily building market. The provisions of the program include: 1) on-site energy audits; 2) a Federal Standby Program; 3) announcements of programs and costs; 4) program announcements one year after state plan approval and every two years thereafter until 1990; 5) annual reports to DOE from states describing audits, eligible customers, and costs; and 6) civil penalties for non-compliance. The specific audit requirements include: a) on-site audits; b) written reports on type, quantity, and rate of energy consumed; c) description of recommended energy conservation measures; d) information on the purchase, financing, and installation of conservation measures; e) the need, cost and first-year savings of conservation equipment; f) maximum charge of $15 per unit, or the actual cost of such activities, whichever is less, to apartment building owners--the full cost of the audit can be charged to commercial building owners; and g) nondiscrimination among eligible customers, suppliers, contractors or lenders.

If utilities would aggressively market the CACS Program, the response rate for installing the recommended measures and procedures could be very high. The information provided in the CACS Program could lead to additional cooperation between tenants and landlords in achieving more efficient energy use in their buildings. The overall results could be a reduced need to build new electric generating plants, a reduced need for oil imports, lower energy bills for low and middle income households, and more efficient use of our nonrenewable resources.

The Need for CACS

The marketplace will not take multifamily or commercial buildings to significant levels of energy efficiency. The traditional constraints to achieving energy conservation in multifamily rental apartments will remain in place. These include: 1) owner/tenant conflicts, 2) capital constraints, and 3) the complexity of retrofit technology. Absent a CACS Program, these constraints could cause landlords to continue the traditional practice of passing the cost of energy on to the tenants.

According to a DOE Analysis of Options for the RCS and CACS, January, 1984, "statistics (such as those in the Census Bureau's Annual Housing Survey and the Energy Information Administration's (EIA) Residential Energy Consumption Survey) are of limited value in determining: 1) how much conservation has taken place, 2) the motivation behind conservation actions (such as the relative influences of energy prices versus the effect of RCS or other conservation programs), and 3) the size of the remaining conservationo opportunity." The analysis goes on to explain that while some data suggest that, " significant amounts of residential and commercial energy conservation have taken place...other data indicate a potential market for conservation of significant size." The DOE analysis states that, "programs may need to be more precisely targeted in order to meet the needs of renters and other groups who have not been reached by RCS or other conservation programs".

The CACS Program was created by Congress to assist in achieving the goals of NECPA, which are, "to reduce the growth in demand for energy in the United States, and to conserve nonrenewable energy resources produced in this Nation and elsewhere, without inhibiting beneficial economic growth". ECC strongly supports this goal. In testimony submitted on February 2, 1983 on DOE's proposed regulations to implement the CACS Program, ECC noted that the need for such a program was confirmed by a report by Argonne National Laboratory, Apartment Building Use Study, October 1, 1982. The report compared the energy conservation potential in its survey of measures and operation and maintenance procedures to those in the CACS Program. The report noted that:

- Storm or thermal doors would save energy in 94% of the cases, but were in use in only 15% of the buildings.
- Storm windows, 100%, 21% use.
- Heat reflective/heat absorptive window-covering material would save energy in 86% of the cases, but is used in 6%.
- Nighttime temperature setback, 96%, 17% use.
- Winter thermostat setting reduction, 99%, 32% use.
- Boiler efficiency modifications, 61% potential, 17% use.

Clearly, significant potential exists for energy savings in multifamily apartment buildings.

CACS Evaluation

The evaluation process for the CACS Program should begin immediately and continue through the life of the Program so that implementation techniques can be refined during the life of the Program. The benefits of an evaluation plan that reviews and makes recommendations for improvements during the implementation stage is that the CACS Program could learn from its mistakes and make adjustments accordingly and thus, lead to a more cost-effective Program. According to an Evaluation of Conservation Programs: A Primer, by Oak Ridge National Laboratory, "The purpose of evaluability assessment is to prevent investment of resources in evaluations that may not be feasible or do not meet the genuine information needs of decisionmaking." Moreover, though the two programs are different, the CACS Program should benefit from some of the mistakes made in the RCS Program. The Oak Ridge anaylsis states that, "Developing evaluation plans and determining their feasibility for many programs can be improved by review evalutions conducted on similar programs. Such a review...provide(s) evaluators with diagnostic feedback and helpful advice about what could or should be done based on what has been accomplished in other relevant evaluations."

The Michigan and California State evaluation efforts of their RCS Programs have incorporated commendable process and impact evaluations. The Michigan State approach included: 1) organizationally separating the evaluation function from program administrative activities; 2) employing a pilot study to guide implementation, and conducted multiple surveys as part of a its design; 3) employing a flexible, semi-experimental research design; 4) examining rival hypotheses; 5) employing multiple data sources in evaluations (used audit data, interviews/self-reports, and actual consumption data); 6) evaluations aimed at identifying energy savings, improving program and reducing program costs; and 7) analyzing the type of fuel savings and money savings and long-term impacts. The California State effort included: 1) an initial survey of customers which indicated that 35% to 42% (17% for Michigan) wished to receive a home energy audit; 2) amending the State Plan to improve program effectiveness and reduce costs; and 3) providing information on available tax credits and conservation low interest loan programs. These evaluation efforts and the follow-up surveys improved the RCS Programs in these States.

State Plans Submitted/Approved

Many State CACS Plans and nonregulated utility Plans have already been approved by DOE. It would be counterproductive to repeal the CACS Program when so many State Plans and nonregulated utility Plans have been submitted and approved. Of the 35 States and Puerto Rico submitting CACS Plans, 12 have been approved since March, 1985 (see Attachment 1). Seven States and the District of Columbia have not submitted Plans. And eight States have formally notified DOE that they do not intend to submit Plans. Of the 31 nonregulated utilities submitting CACS Plans, 23 have been approved (1-18-85) (see Attachment 2). Approval of a State Plan by DOE triggers implementation of CACS in that State.

CONCLUSION

Again, the Energy Conservation Coalition opposes the bill introduced by Senator Bennett Johnston (S. 410) to repeal the CACS Program. We agree with Senator Johnston's statement accompanying the bill, which notes that, "This review may produce ideas for legislation different from my bill. We may decide to leave things just as they are." ECC agrees that the CACS should be left in place so that it can be implemented without a shroud of uncertainty and evaluated as to its effectiveness. We welcome the spirit of review, but suggest that it take the form of 1) correctly performed process evaluations to improve program cost-effectiveness in order to give the program a chance to work; and 2) correctly performed impact evaluations to assess cost-effectiveness after implementation. DOE should draw upon the evaluation expertise of the Oak Ridge National Laboratory and the Michigan CACS Program and disseminate informatior on how to conduct process and impact evaluation to the States.

The marketplace alone will not achieve significant levels of energy efficiency. We believe that a strong and agressively implemented federal CACS Program is needed to assist States and utilities in implementing successful multifamily building energy efficiency audits and retrofits. The members of ECC will continue to support the CACS Program and we are ready to assist DOE, States, utilities and citizens in assuring that this effort is successful.

Attachment 1

CACS STATE PLAN SUBMISSION (S) AND APPROVAL (A)

	1984						1985			
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Alabama	S									
Alaska[2]										
Arizona	S									
Arkansas	S						A			
California	S									A
Colorado[2]										
Connecticut	S									
Delaware[2]										
D. C.										
Florida	S									
Georgia						S				
Hawaii	S									
Idaho										
Illinois										
Indiana	S									A
Iowa										
Kansas										
Kentucky		S							A	
Lousiana										
Maine		S								
Maryland[2]										
Mass.			S							
Michigan	S	A								

Attachment 1

	1984 June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	1985 Feb.	Mar.
Minnesota					S					
Mississippi	S									
Missouri										
Montana			S							
Nebraska[1]										
Nevada	S									
New Hampshire		S								
New Jersey	S									
New Mexico	S						A			
New York	S									
North Carolina	S								A	
North Dakota	S									
Ohio	S									A
Oklahoma	S									
Oregon	S									
Pennsylvania							S			
Puerto Rico	S									
Rhode Island	S					A				
South Carolina	S									
South Dakota	S									
Tennessee										A
TVA	S									
Texas				S						
Utah[2]										

Attachment 1

	1984								1985	
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Vermont			S							A
Virginia[2]										
Washington	S									
West Virginia[2]										
Wisconsin	S							A		
Wyoming[2]										

[1] Nebraska has no regulated utilities.

[2] Has informed DOE formally that State does not intend to submit Plan. States without Plans, that have not formally informed DOE of non-participation, have either informally notified the Department that they do not intend to submit a Plan in the near future or have requested an extension for Plan submission.

Attachment 2

CACS PLAN REVIEW STATUS AS OF 5/1/85

NONREGULATED UTILITIES

Benton County, WA	approved
Board Public Utilities, K.C., KS	approved
Chelan County, WA	approved
Clark County, WA	approved
Colorado Springs, CO	approved
Cowlitz County, WA	approved
Eugene, OR	awaiting response
Glendale, CA	Plan under review
Grant County, WA	approved
Grays Harbor County, WA	approved
KNE Nebraska	approved
Lansing Board Power and Light, MI	approved
Lincoln PUD, OR	approved
Los Angeles, CA	approved
Metro.Util.Dist., Neb	approved
Minnegasco, NEB	Plan under review
Modesto, CA	approved
Nebraska Public Power	approved
Northwestern PSC, SD	approved
Omaha Public Power, NEB	approved
Palo Alto, CA	approved
Peoples Natural Gas, NEB	awaiting response
Salt River Project, AZ	reviewing response
Santa Clara, CA	approved
Santee Cooper, SC	awaiting response
Seattle City Light, WA	approved
Snohomish County, WA	approved
Springfield, IL	awaiting plan
Tacoma, WA	awaiting response
Turlock Irr. Dist., CA	approved

Senator Evans. Thank you very much.

I understand the next four gentlemen are all appearing on essentially the same issues, but you can summarize your views, starting with Mr. Farruggia, or unless you have another order that you would like to proceed on.

Mr. O'Connor. We would like to reverse it, if we could, Senator.

Senator Evans. OK. Mr. O'Connor.

STATEMENT OF PATRICK O'CONNOR, ALLIANCE FOR FAIR COMPETITION

Mr. O'Connor. Thank you very much. Mr. Chairman, thank you for allowing the Alliance for Fair Competition the opportunity to testify before the subcommittee today on the subject of repeal of CACS.

I am Pat O'Connor and I am here today as a representative of the Alliance for Fair Competition. The alliance is a coalition formed 2½ years ago to combat what we saw as unfair, anticompetitive business practices by regulated gas and electric utility companies. The alliance is composed of 21 national trade organizations representing 4.5 million small businesses.

Several witnesses on this panel will provide the subcommittee with additional insight into utility competition problems. I have included some additional information with my testimony for the record that I will not go into today. Our comments will be limited to the CACS Program.

As the committee is aware, the Energy Security Act of 1980, which created CACS, contained no specific statutory language to ensure the utility programs did not involve unfair methods of competition, nor were protections provided in that law against anticompetitive utility practices. Further, the entire concept of subsidized utility audits ignores the fact that existing businesses were already providing such audits and the utility audit programs would unfairly disadvantage private auditing firms.

Absent this clear statutory language in the Energy Security Act, the alliance and its members have worked closely with the Department of Energy and many of the States to include competitive protections against anticompetitive utility practices.

Before specifically addressing S. 410 and repeal, the alliance would request that the committee, if at future point decided to expand the legislation to include the RCS Program, that you consider including in your legislation those RCS provisions included in the 1984 House-passed legislation, H.R. 5946. That legislation adopted a recommendation that a State public hearing be provided to review and approve the need for and scope of utility involvement in supply and installation of residential energy conservation measures.

On S. 410 specifically, the alliance finds it very difficult to support a simple repeal of CACS for the following reasons. With CACS as the impetus, many States have decided to move forward with the program and will proceed with a program even if there is repeal. In those States where the State may decide not to proceed, many utilities will use it as an impetus to continue with their own CACS-type programs.

The potential for unfair and anticompetitive practices will still exist in many cases. The problem created by the drafters of the Energy Security Act, no competitive protection language, does not go away in the event of repeal. The U.S. DOE CACS rules have given States the authority to place competitive restrictions on utilities. Repeal of CACS may well strip many State agencies of their authority to enforce competitive restrictions absent corresponding authority in their own State law.

I would like to elaborate on this last point. Although there are no competitive provisions in the statute, it did allow the Secretary of Energy to promulgate all necessary rules. Although the DOE final rules do not go as far as many of us would have liked, they do contain certain authorities, provide certain authorities, to the State as far as competition.

For example, a State may prohibit utility advertising with the audit announcement. A State may prohibit the CACS auditor from recommending a specific supplier or contractor. The State can prohibit the utilities from using the audit results to generate sales leads. And the State can prohibit the utility from using the audit to entice a building owner to convert from one energy source to another.

Many State CACS plans, not all, but many, have used DOE rules to include the preceding requirements as part of their State plan. Absent corresponding State authority a repeal of CACS may preclude such competitive provisions from being incorporated into the State programs that continue.

For the alliance to support repeal of CACS, the legislation must include transitional provisions that provide the States the continued authority to implement competitive provisions.

Second, the alliance also feels that repeal of CACS may send the wrong signal to the public and to the States—that is, that energy conservation is no longer a national priority. The alliance strongly urges that the Congress to avoid such an interpretation, delegate fully the responsibility for energy conservation to the States, and, further, that the utilities' involvement in commercial energy conservation should be subject to prior State regulatory approval.

Although utilities may in some cases be the suitable entity to encourage energy conservation, many times it may be inconsistent with their proprietary interest in selling energy. Further, energy conservation can be used by a utility company to increase its market share, to further fuel conversion or to stimulate product sales such as heat pumps, objectives which may not be consistent with the public interest.

Energy conservation programs by utilities may lead to ratepayer subsidies of energy conservation improvements for the utilities' more affluent users, as it has been said, the RCS Program does. Energy conservation activities by utilities—the audits, supply and installation of measures—may be better performed by the private sector at a less cost to the ratepayer without a negative effect on competition. These are all questions which can be properly explored through prior approval and public hearings.

Prior State approval and continued State regulatory authority would ensure that energy conservation programs by utilities are consistent with the public need.

Mr. Chairman, the alliance looks forward to working with you and your staff in the development of this legislation.

[The prepared statement of Mr. O'Connor follows:]

STATEMENT BY

PATRICK O'CONNOR,

ALLIANCE FOR FAIR COMPETITION

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

SUBCOMMITTEE ON ENERGY
REGULATION AND CONSERVATION

MAY 6, 1985

Mr. Chairman, thank you very much for allowing the Alliance for Fair Competition to testify before the Subcommittee on the subject of repeal of the Commercial and Apartment Conservation Service Program. I am Patrick O'Connor and am here today as a representative of the Alliance.

The Alliance for Fair Competition is a coalition formed two years ago to combat unfair and anticompetitive practices by regulated gas and electric utility companies. It is composed of 21 national trade organizations representing approximately 4.5 million small businesses. Member organizations of the Alliance represent a variety of businesses, including retail lumber and building material dealers, contractors, wholesalers, fuel oil jobbers and manufacturers.

As stated, the Alliance was formed to seek remedies to unfair and anticompetitive business practices of utilities. The basic problem that our members face is that utility companies are regulated monopolies, guaranteed a rate of return on their investment through their rate structure, while at the same time engaged in direct competition with private business. Monopoly power, market dominance and cross-subsidization by the utility put the private business at an unfair competitive disadvantage. Unfair and anticompetitive utility practices are the subject of many court cases and state regulatory proceedings. The Federal Trade Commission is presently investigating the activities of four utility companies.

I have included with my prepared statement testimony presented by the Alliance during a May 22, 1982, hearing of the House Small Business Committee on utility competition. That Alliance testimony will provide the Subcommittee with an in-depth discussion of the issue.

Several witnesses on this panel will provide the Subcommittee with additional insight into utility competition, particularly their experience with the CACS program.

Energy conservation and both the Residential Conservation Service Program and the Commercial and Apartment Conservation Service Program are factors in anticompetitive utility activities. Our comments today will be limited to the CACS program. As the Committee is aware, the Energy Security Act of 1980, which created CACS, contained no specific statutory language to ensure that utility programs did not involve unfair methods of competition, nor were protections provided against anticompetitive utility practices. Further, the entire concept of subsidized utility audits ignored the fact that existing businesses were already providing such audits and that utility audit programs would unfairly disadvantage private auditing firms.

Absent clear statutory language, the Alliance and its members have worked closely with the DOE and the states to include protections against anticompetitive utility practices. The DOE's current proceeding for CACS standby-rules is addressing such questions as:

- prohibition on advertising as part of the audit announcement;
- a ban on fuel switching;
- recommendations for the contracting out of audits to private firms; and
- a prohibition on the use of audit results by the utility for sales purposes.

At the state level, many state plans have included provisions to protect against anticompetitive utility practices. Although these protections may not go far enough, the states have become cognizant of the potential for anticompetitive practices.

Before addressing S. 410, the Alliance requests the Committee, in the event that at some future point the legislation is expanded to include RCS, to incorporate into the Senate legislation the additional provisions for competition in RCS contained in the 1984 House-passed legislation, H.R. 5946. That legislation adopted a recommendation by the U.S. Small Business Administration that a state public hearing be provided to review and approve the need for and scope of utility involvement in the supply and installation of energy conservation measures.

S. 410

The Alliance finds it very difficult to support a simple repeal of the Commercial and Apartment Conservation Service program for the following reasons:

- With CACS as the impetus, many states have decided to move forward with the program and will proceed with the program, even if there is a repeal. In those states where the state may not proceed, many utilities may continue with their own CACS programs.
- The potential for unfair and anticompetitive practices will still exist in some cases. The problem created by the drafters of the ESA, e.g. no competitive restrictions on utilities in CACS, does not go away. The damage has been done and Congress must recognize that.

- The U.S. DOE CACS rules have given states the authority to place competitive restrictions on utilities. Repeal of CACS may strip many state agencies of their authority to enforce competitive restrictions, absent corresponding authority under state law.

I would like to elaborate on this last point. Although the ESA contained no specific competitive provisions, it did allow the Secretary of Energy to promulgate all necessary rules. The Department of Energy recognized that there was merit to the concerns raised by the private sector regarding the potential for an adverse impact on competition. Although the DOE final rules did not go as far as many in the Alliance would have liked, the rules did give certain authority to the states. For example, a state can prohibit utility advertising with the audit announcement; a state can prohibit the CACS auditor from recommending a specific supplier or contractor; the state can prohibit the utility from using the audit results to generate sales leads; and the state can prohibit the utility from using the audit to entice a building owner to convert from one energy source to another.

Many state CACS plans have used the DOE rules to include the preceding requirements as part of the state plan. Absent corresponding state authority, a repeal of CACS may preclude such competitive provisions from being incorporated into those state CACS programs which will continue.

For the Alliance to support repeal of CACS, any legislation must include transitional provisions that provide the states the continued authority to implement competitive provisions.

The Alliance also believes that repeal of CACS may send out the wrong signal, e.g., that energy conservation is no longer a national priority. The Alliance strongly urges the Congress to avoid such an action and recommends that the responsibility for energy conservation be fully delegated to the states. Further, that utility involvement in commercial energy conservation should be subject to prior state regulatory approval. Although utilities may in some cases be a suitable entity to encourage energy conservation, many times it may be inconsistent with their proprietary interest of selling energy. Further, energy conservation can be used by a utility company to increase its market share, to further fuel conversion or to stimulate product sales, such as heat pumps, objectives which may not be consistent with the public interest. Energy conservation programs by utilities may lead to ratepayer subsidies of energy conservation improvements by the utility's more affluent users (as has been the case with RCS). Energy conservation activities by utilities -- audits, supply and installation -- may be better performed by the private sector at less cost to ratepayers and without a negative effect on fair competition. These are all questions which can be properly explored though prior approval and public hearings. Prior state approval and continued state regulatory authority, as part of a rate proceeding possibly, will ensure that energy conservation programs by utilities are consistent with the public need.

Mr. Chairman, the Alliance will be pleased to provide your staff with proposed language and to work with the Committee and others on this legislation. I thank you for your consideration in allowing the Alliance to appear here today.

Attachment [illegible]

ALLIANCE FOR FAIR COMPETITION

National Association of
Plumbing-Heating-Cooling Contractors
P.O. Box 6808
Falls Church, VA. 22046
703-237-8100

American Supply Association
Suite 300
1919 Pennsylvania Avenue, N.W.
Washington, D.C. 20036
202-223-6222

PURPOSES

- To combat anticompetitive and unfair trade practices by utilities.
- To develop a clearinghouse of examples and case studies which can be used by others involved in the effort.
- To assist state and local associations and small businesses to ward off anticompetitive and unfair practices through public service/utility commissions, legislative bodies and litigation.
- To work with the Congress and federal agencies to get action on unfair and anticompetitive practices.

MEMBERS

National Association of Plumbing-Heating-Cooling Contractors
American Supply Association
Air Conditioning Contractors of America
American Consulting Engineers Council
Associated Specialty Contractors

American Subcontractors Association
Door and Hardware Institute
Independent Electrical Contractors Association
Insulation Contractors Association of America
Mechanical Contractors Association of America

National Association of the Remodeling Industry
National Construction Industry Council
National Electrical Industry Council
National Lumber and Building Material Dealers Association
National Oil Jobbers Council

National Roofing Contractors Association
Northamerican Heating and Airconditioning Wholesalers
Plumbing Manufacturers Institute
Sheet Metal and Air Conditioning Contractors National Association
Small Business Legislative Council
Association of the Wall and Ceiling Industries - International

9/84

Attachment 2

ALLIANCE FOR FAIR COMPETITION

National Association of
Plumbing-Heating-Cooling Contractors
1016 20th Street, N.W.
Washington, D.C. 20036
202-331-7677

American Supply Association
Suite 300
1919 Pennsylvania Avenue, N.W.
Washington, D.C. 20036
202-223-6222

Statement by

ALLIANCE FOR FAIR COMPETITION

On Competition with Small Businesses by Utilities

before the
Antitrust and Restraint of Trade Subcommittee
Committee on Small Business
United States House of Representatives

presented by
Dennis Lavallee, Co-chairman

May 22, 1984

Mr. Chairman. Thank you for scheduling these hearings on competition with small business by utilities and for giving us an opportunity to call congressional attention to this grievous assault on small business.

My name is Dennis Lavallee and I am co-chairman of the Alliance for Fair Competition (AFC). This is a coalition of 18 national groups who have banded together to combat unfair and anticompetitive practices by utilities. Included in our numbers are three other coalitions (Associated Specialty Contractors, National Construction Industry Council, Small Business Legislative Council) who share our concern (See Attachment A). Together, we include 68 major trade organizations representing more than four million small businesses.

This afternoon, you will hear from representatives of three of the groups who will provide illustrative examples of unfair competition from utilities. There are many many more which could have been presented and we have provided your staff with documentation on them.

WHAT'S UNFAIR ABOUT UTILITY COMPETITION?

So, why is competition from utilities any different than competition from other businesses?

Small businesses suppport fair and open competition. However, a utility company is given protected status. The utility is granted monopoly status (free from competition) and is guaranteed the opportunity for a rate of return. In exchange for this protected status, it is regulated by the state regulatory commission.

Usually a large business, its size and resources far outstrips many small businesses in the community. When this protected entity is permitted to compete in other markets, there are market advantages which it enjoys which are unmatched by most others, particularly small businesses.

Picture for a moment a fortress surrounded by fields. Men are competing on the field in hand to hand combat. Symbolizing small businesses, they are limited in resources. The fortress symbolizes the state regulatory commission which provides a protective enclosure for the garrison within. Here the utility can amass its resources and use them -- food, fresh horses, weapons. Then, troops are sent forth to join the field combat. Clearly, they have a competitive advantage that can critically injure, if not destroy, the combatants already there.

What's the nature of the resources that provides a utility with that market advantage?

- o Cross-subsidization - While generally state regulatory commissions prohibit a utility from using its regulated activities to subsidize its unregulated activities, energy audits are one notable exception in which the utility is congressionally mandated to use ratepayer money to subsidize a business activity currently performed by small business. In addition, we believe that the commissions are not effectively controlling ratepayer subsidization of a utility's indirect costs.
- o Capitalization - The utility may provide loans, loan guarantees, or other financial subsidies to a new business activity.
- o Administration and overhead - Management, planning, accounting, legal assistance, research and development resources may be used by a utility to start up or operate other lines of business. In addition, office space, equipment, or personnel of the utility may be available.

o Name - Instant name recognition is a valuable asset which a utility enjoys when venturing into a new market.

o Credit information - From customers' bill payment records, the utility has a built in source of credit information for use in other business activities.

o Billing - Postage, mailing and personnel costs are already being paid by the ratepayers. Adding charges for other business activity to the bill produces very little expense to the other activity.

o Advertising - In many states, advertising costs can be passed on to ratepayers. While advertising directly connected with an unregulated activity may need to be charged to that activity, there are many opportunities for the utility to also include material with advertising promoting its regulated activities. The postage for bill stuffers promoting a service contract is paid by ratepayers as part of their utility bill.

o Direct mail - With utility bills going out monthly and with immediate access to customers initiating or terminating service, utilities have the most up-to-date mailing lists in existance.

o Market data - To promote their fuel type, utilities frequently have extensive market data on their customers. This may readily be made available for marketing of its unregulated business activities.

o Selective referral and market allocation - With its access to information on consumer needs and requests, a utility can make or break a small business by arbitrarily referring or not referring business. That same market advantage can be of tremendous competitive value if the utility funnels the business to itself.

- o Direct from the manufacturer ordering - With larger volume orders, the utility can circumvent usual distribution channels, such as suppliers, contractors, and retailers, and buy direct from manufacturers with possible favorable pricing for bulk orders.
- o Consumer financing - The utility's large capital base gives utility access to providing favorable consumer financing. Financing may be added right on to the utility bill.
- o Consolidated tax returns - The utility may reap financial benefits from consolidating its financial data for tax purposes.

These are some of the more significant benefits which a regulated utility monopoly will have which are not as readily available to unregulated small business. In fact, they may not be available at all. The other witnesses this afternoon will provide examples of many of these marketing benefits which give the utility an unfair advantage.

IS THIS A NEW PROBLEM?

In fact, the problem has been around for quite a number of years, but has become of increasing concern in the last few years. Like so many problems, they may subside, but they're soon back to haunt us unless we find permanent and long term solutions.

Let me give you an historical overview.

A major root of the problem is the competition between fuel types such as when the gas and the electric utilities each strive to maintain and increase their market share. For years, the competition between gas, electricity, and other fuel types has been intensive. Utility companies have relied on promotional practices, supply, installation, service, and financing programs to enhance their position in the market place.

At least once before in recent history, this has produced a public outcry resulting in congressional attention. In 1968, Congressman John Dingell conducted hearings on utility promotional practices before his Small Business Subcommittee, here in the House.

In the past, utilities promoted fuel consumption. More recently, the emphasis has shifted to energy conservation. Utility companies have attempted to move into the forefront in an attempt to promote energy conservation. To increase their market share, they strive to make their power source more economical and to lock consumers into their fuel type. This pressure to promote energy conservation while building market share has been increased further by well-intentioned public officials. Energy conservation programs were developed which gave inadequate attention to the effect on competition.

In 1978, Congress passed legislation creating the Residential Conservation Service which requires utilities to offer energy audits. Although the legislation had provisions prohibiting utility supply and installation, numerous loopholes make those prohibitions virtually meaningless.

Meanwhile, the legislation mandates that the rate payers subsidize energy audits provided by utilities which are in competition with those offered by small business. A utility cannot charge more than $15 for an audit which costs a minimum of $100 to $150 to provide.

In 1980, Congress followed up on that by creating the Commercial and Apartment Conservation Service (CACS). This program even further enhances utility involvement by requiring audits of multi-family dwellings and small commercial establishments. Furthermore, in its haste to promote energy conservation, Congress made a major oversight regarding competition. Congress failed to include even the weak anticompetitive protections which were included in the RCS program.

By next month, states are suppose to submit state plans for implementing CACS. Despite a Department of Energy cautionary note and recommendations from the Small Business Administration Office of Advocacy, few have anticompetitive restrictions in them.

Utilities will be free to offer not only audits to our customers, but also to use the in-home and in-the-business audits as marketing opportunities to promote their own supply, installation, and service programs.

To combat unfair competition problems, the Alliance for Fair Competition was formed. The coalition has been aggressively attacking the problem on several fronts:

1) Small businesses are forming coalitions in their local areas to meet with utilities and to intervene in state regulatory proceedings.

2) When utilities wanted changes in the Public Utility Company Holding Act (PUHCA), the coaltion met with utility representatives to fashion compromise language that would provide anticompetitive protections.

3) Last summmer, we met with Federal Trade Commission staff. As a result of the evidence we provided to the Commission, the FTC is now conducting an investigation of utility practices. They are expected to select several cases to pursue.

4) The Senate Small Business Committee, chaired by Sen. Lowell Weicker, conducted hearings on utility competition last November.

5) We provided comments to the SBA Office of Advocacy to assist them in producing their March report on "Utility Competition with Small Business".

6) We have provided Congress with amendments for the RCS and CACS legislation which would prohibit use of utility programs to compete unfairly with small business.

7) Today, this subcommittee is responding to the concerns that have been expressed by conducting this hearing to examine them.

ISN'T THIS A STATE ISSUE?

Why isn't this a state issue rather than a federal issue?

It is, in fact, a state issue in many states as small businesses initiate and intervene in state commission proceedings. However, unfair utility competition is also an issue for federal public policy concern:

1) when state commissions decline to consider the issue of competition or conclude that they do not have authority over the unregulated activities;

2) when utility practices violate the antitrust laws;

3) when Congress requires utility activity;

4) when utility activities cross state lines preventing effective regulation by a state commission.

HOW IS THE CONSUMER AFFECTED?

It is also a consumer issue. If utilities are permitted to control the market or limit competition, consumer choice is reduced. Yet the consumer has been required by the state regulatory commission to subsidize the indirect costs of the utility to conduct its unregulated activities which are now reducing consumer choice.

The consumer would be better served if the unregulated activities of a utility are expensed at full market based costs and credited to the utility function. If a bill stuffer goes with the utility bill, all of the costs for the bill stuffer, postage, and mailing would be charged to the unregulated activity. Such a proposal would lower rates since many of the indirect costs would no longer be charged to the rate payer, but to the unregulated activity.

RECOMMENDATIONS

1) We fully support the March, 1984 report by the Chief Counsel for Advocacy of the Small Business Administration which recommends that utilities should be prohibited from sales, installation, or service. These, plus auditing, financing, and fuel switching efforts have resulted in unfair and anticompetitive programs that critically injure small business. Utilities should adhere to their primary mission of supplying energy and power to consumers.

2) Antitrust enforcement should be pursued with delibeerate speed before there is irreparable injury to competition.

3) Congress should strengthen the antitrust laws to prohibit utility monopolies (protected from competition) from using their regulated companies to compete in unregulated markets. Antitrust laws should restrict the anticompetitive effects of marketing practices of big business monopolies.

4) Congress should amend the RCS and CACS programs to build in the strong anticompetitive protections necessary or it should repeal the programs altogether to remove the federal implied approval of unfair utility practices which these programs provide.

Again, thank you for scheduling this hearing. Now members of the coalition will tell you how this problem affects them in their communities.

Attachment A

ALLIANCE FOR FAIR COMPETITION

National Association of
Plumbing-Heating-Cooling Contractors
1016 20th Street, N.W.
Washington, D.C. 20036
202-331-7677

American Supply Association
Suite 300
1919 Pennsylvania Avenue, N.W.
Washington, D.C. 20036
202-223-6222

PURPOSES

- To combat anticompetitive and unfair trade practices by utilities.
- To develop a clearinghouse of examples and case studies which can be used by others involved in the effort.
- To assist state and local associations and small businesses to ward off anticompetitive and unfair practices through public service/utility commissions, legislative bodies and litigation.
- To work with the Congress and federal agencies to get action on unfair and anticompetitive practices.

MEMBERS

National Association of Plumbing Heating Cooling Contractors
American Supply Association
Air Conditioning Contractors of America
American Consulting Engineers Council
American Subcontractors Association

Associated Specialty Contractors
Door and Hardware Institute
Independent Electrical Contractors Association
Mechanical Contractors Association of America
National Construction Industry Council

National Lumber and Building Material Dealers Association
National Oil Jobbers Council
National Association of the Remodeling Industry
National Electrical Contractors Association
Northamerican Heating and Airconditioning Wholesalers

Plumbing Manufacturers Institute
Sheet Metal and Air Conditioning Contractors National Association
Small Business Legislative Council

2/84

MEMBERS OF THE ASSOCIATED SPECIALTY CONTRACTORS

Mason Contractors of America
Mechanical Contractors Association of America
National Association of Plumbing-Heating-Cooling Contractors
National Electrical Contractors Association
National Insulation Contractors Association

National Roofing Contractors Association
Painting and Decorating Contractors of America
Sheet Metal and Air Conditioning Contractors National Association

MEMBERS OF THE NATIONAL CONSTRUCTION INDUSTRY COUNCIL

American Concrete Pavement Association
American Consulting Engineers Council
American Rental Association
American Road and Transportation Builders Association
American Society of Civil Engineers

American Subcontractors Association
Associated Builders and Contractors
Associated Equipment Distributors
Associated General Contractors of America
Associated Landscape Contractors of America

Association of the Wall and Ceiling Industries - International
Construction Industry Manufacturers Association
Door and Hardware Institute
Mechanical Contractors Association of America
National Asphalt Pavement Association

National Association of Minority Contractors
National Association of Plumbing-Heating-Cooling Contractors
National Association of Surety Bond Producers
National Association of Women in Construction
National Constructors Association

National Electrical Contractors Association
National Society of Professional Engineers
Portland Cement Association
Prestressed Concrete Institute
Sheet Metal and Air Conditioning Contractors National Association

MEMBERS OF THE SMALL BUSINESS LEGISLATIVE COUNCIL PUBLICLY SUPPORTING FAIR COMPETITION BY UTILITIES

American Association of MESBICs
Architectural Precast Association
Automotive Service Councils, Inc.
Business Advertising Council
Christian Booksellers Association

Direct Selling Association
Eastern Manufacturers and Importers Exhibit
Electronic Representatives Association
Florists' Transworld Delivery Association
Independent Bakers Association

Independent Sewing Machine Dealers Association
Institute of Certified Business Counselors
International Association of Trade Exchanges
Ibero-American Chamber of Commerce
Latin American Manufacturers Association

Manufacturers Agents National Association
Menswear Retailers of America
National Association of Chemical Distributors
National Association of Plumbing-Heating-Cooling Contractors
National Association of the Remodeling Industry

National Council for Industrial Innovation
National Electrical Contractors Association
National Independent Dairy-Foods Association
National Office Products Association
National Oil Jobbers Council

National Small Business Association
National Society of Public Accountants
National Spa & Pool Institute
National Tooling and Machining Association
Power and Communications Contractors of America
Urethane Foam Contractors Association

Senator NICKLES [presiding]. Thank you very much, Mr. O'Connor.

Mr. Norton? All right, go ahead.

STATEMENT OF THOMAS NORTON, GOVERNMENT AFFAIRS COUNCIL, AMERICAN SUPPLY ASSOCIATION

Mr. NORTON. Mr. Chairman, Senators, thank you for giving the American Supply Association an opportunity to participate in this hearing. I am Tom Norton, vice president of marketing, Paine Supply Co., Jackson, MI. I am speaking today as a member of the Government Affairs Council of the American Supply Association.

Our association is a national association which represents wholesale distributors of plumbing, heating, cooling and piping products. Our members are suppliers of equipment and systems to the residential, commercial and industrial markets in all 50 States. Our primary customer base is the installing contractor.

Time is dragging on here, and I am not going to take up any more of your time with a lot of detail about anticompetitive utility practices. My written statement includes previous testimony by ASA on utility competition, as well as two excellent articles on that subject, and I understand that our concerns regarding utility competition cannot properly be addressed by your committee.

However, your committee does have authority to determine public policy and law relating to the proper role of utility companies in energy conservation. The truth is, utility competition with private business is a fact and that gas and utility companies are straying from the energy business into the sale, installation and service of appliances, products and systems with alarming frequency.

Wholesalers throughout the country have seen sales and profits decline as utilities have become our direct competition. For instance, and I will give you one example, right here in Washington. Washington Gas Light Co. operates several divisions which are involved in the supply and installation of energy conservation equipment for residential, commercial, industrial, and institutional users. Each of these supposedly separate divisions operates under the name of Washington Gas Light. Advertising, equipment and personnel are shared by the utility and its division. This kind of relationship and the possibility of illegal cross-subsidization is now before the Maryland Public Service Commission.

I think one of the things that we need is to be sure that utility private sector ventures are subject to the kind of scrutiny necessary to prevent anticompetitive damage to small business or ratepayer subsidization of one kind or another. What does all this have to do with your committee?

RCS and CACS were well-intentioned programs, but the truth is that they have contributed to making a bad situation worse for our industry. Even though prohibitions concerning sales of energy conservation products are clear within the RCS law, these prohibitions have proven difficult to enforce and in fact the system in practice doesn't work.

It's been mentioned earlier that last year the Conservation Service Reform Act of 1984 was passed in the House, which included some workable provisions which would ensure open and fair competition under the RCS program. If RCS is included in any legislation considered by your committee, I urge you to include those provisions contained in that House bill.

The original legislation which enacted CACS allowed a utility to conduct a ratepayer-subsidized audit of a commercial building and then turn around, using the results of that audit, and offer for sale to that commercial building owner a heating and air-conditioning or energy conservation system. ASA opposed CACS at that time, as originally written, and we do now.

There are some pitfalls in the repeal, which has also been mentioned, of CACS. At least the legal advice in some areas tells our members that with outright repeal that they may be left without the legal jurisdiction to ask, as that appears to be drawn from the Federal law. That particularly has been brought to my attention by some of our members in Massachusetts who has been successful in writing some tough protections which is included in their State plan.

The question for Massachusetts wholesalers and contractors is with repeal of the CACS can the State enforce the anticompetitive protections without the Federal authority to do so. The American Supply Association endorses the position of the Alliance for Fair Competition that repeal of CACS must provide for continued authority to the States to enforce anticompetitive protection in energy conservation programs. Without such provisions, our members will continue to be threatened by anticompetitive resulting practices.

Thank you very much.

[The prepared statement of Mr. Norton follows:]

WASHINGTON GOVERNMENT
AFFAIRS OFFICE

Suite 300
1919 Pennsylvania Ave., N.W.
Washington, D.C. 20006
202/223-6222

Illinois Office:
Kent & O'Connor
880 N. Lake Shore Dr.
Chicago, IL 60611
312/938-0919

The National Association
of Full-Service Plumbing
Heating, Cooling and Piping
Products Wholesalers

American Supply Association
20 N. Wacker Dr.
Chicago, Illinois 60606
312/236-4082

Peter W. Schwartz
Executive Vice President

Statement By

Thomas Norton,

Government Affairs Council
American Supply Association

Before the

Committee on Energy and Natural Resources

Subcommittee on Energy
Regulation and Conservation

May 6, 1985

Mr. Chairman, thank you very much for providing the American Supply Association the opportunity to participate in this hearing. I am Tom Norton and I am Vice President of Marketing for the Paine Supply Company located in Jackson, Mississippi.

I am here today in my capacity as a member of the ASA Government Affairs Council. ASA is the single, national association which represents wholesalers and distributors of plumbing, heating and cooling products and systems. ASA members are located in all 50 states and are the suppliers of equipment and systems for residential, commercial and industrial uses. Our primary customers are the installing contractors. Mr. Chairman, in all probability, the heating system in your home, as well as the heating system in this Senate Office Building, was supplied by an ASA member.

With the onset of the energy crisis over the past 15 years, energy conservation has become a major segment of our business. The American Supply Association has testified before numerous Congressional Committees in order to bring to the attention of the Congress the very real threat that the private sector faces from unfair and anticompetitive business practices by gas and electric utilities.

Like a blitzkrieg throughout the country, gas and electric utility companies are venturing from the production and distribution of energy into the sale, installation and service of gas and electric appliances, products and systems. Wholesalers and suppliers throughout the country are seeing their profits decrease and their businesses threatened as utilities have become our direct competitors.

Rather than taking the Subcommittee's time to go into detail about utility business practices and the resultant anticompetitive effect, I have included for the record testimony by ASA before both the House and Senate Small Business Committees on utility competition. In addition, I have included two excellent articles from Domestic Engineering which summarize the Small Business Committee hearings.

I would like briefly to mention two examples of utility competition which are illustrative of the national problem.

- In Massachusetts, Bay State Gas Company offers for rent or lease conversion burners, boilers and furnaces to commercial and industrial users. As a Bay State flyer says:

  > "Bay State Gas will provide the appropriately sized burner for your heating needs and will install it in your boiler or furnace. Once installed, burner maintenance is provided by us at no cost to you. You buy nothing. You install nothing. We do all the work."

  Because of Bay State's program, an ASA member in Brockton, Massachusetts, has seen his annual sales of conversion burners drop from 300 to less than 20.

- In the Washington, D.C., area, Washington Gas Light Company operates several divisions which are involved in the supply and installation of energy conservation equipment and material for residential, commercial, industrial and institutional users.

> Each WGL division, supposedly separate from the parent, operates under the banner of Washington Gas Light. Advertising, equipment, personnel, etc., are shared by the utility and its division. The propriety of such a relationship and the possibility of illegal cross-subsidization is now before the Maryland Public Service Commission because of a complaint filed by local business owners.

Each of these examples indicates a need to closely scrutinize utility ventures into private sector business because:

(1) Such programs are often and easily subsidized by passing through part of the costs to all ratepayers. A utility's rates will often absorb many of the research, development, administrative, marketing and product costs.

(2) When competing head to head with small businesses for the same customer, utilities--because of their protected monopoly status--enjoy a massive marketing advantage through their penetration into every home, office building and factory.

(3) Utility involvement in sales, installation and service of gas and electric products and systems to their customer base ensures a continued demand for their primary product -- energy -- to those same customers.

Appliance operations of a utility are, however, rarely subject to the kind of scrutiny necessary to prevent anticompetitive effects on small business competitors or ratepayer subsidization of the appliance program. Traditional regulation of utilities does not adequately review pricing practices, marketing practices and ratepayer subsidies.

Utility competition with private business is a fact and it is being reviewed at every level of government. The Federal Trade Commission is investigating four utilities for possible anticompetitive activities. California passed legislation in 1984, and legislation is pending before several state legislatures this year. There are numerous cases pending before the courts and public service commissions.

Mr. Chairman, we appreciate the fact that the basic concern that wholesalers have with utility competition cannot properly be addressed by the Senate Energy Committee. However, your Committee has the authority to determine public policy and law for the proper role of utility companies in energy conservation, as evidenced by the Energy Conservation Policy Act and the Energy Security Act.

The RCS and CACS programs have significantly exacerbated an already serious problem. Although the National Energy Conservation Policy Act (NECPA) contained strict prohibitions on utility sales of energy conservation equipment as part of the audit, these prohibitions have proven to be unworkable and difficult to enforce. The U.S. Department of Energy has sanctioned utility supply and installation practices in direct violation of both the

NECPA statute and DOE's regulations. Specific complaints have been brought to the attention of DOE by the Alliance for Fair Competition, but to no avail. As you are aware, the Conservation Service Reform Act of 1984, which passed the House but failed in the Senate, included tough, workable provisions which would have ensured open and fair competition in the RCS program. If RCS is included in any legislation passed by your subcommittee, Mr. Chairman, ASA would urge you to include the provisions from the 1984 legislation.

The Energy Security Act of 1980, which enacted the CACS program, contained no specific limitations on utility supply and installation activities. The American Supply Association strongly opposed CACS because of the inherent competitive advantage afforded to utility companies. CACS would allow a utility to conduct a ratepayer subsidized audit of a commercial building, and turn around and use the audit results to sell a heating or cooling system to that very same commercial building owner.

Many state CACS plans, relying on admonitions contained in the U.S. DOE CACS rule and with input from the U.S. SBA and ASA members, have incorporated prohibitions and limitations on utility practices within commercial energy conservation. In many cases, the basis or authority for state prohibitions, i.e., utility advertising with the audit announcement; utilities using the audit results for sales purposes; or utility auditors recommending the building owner have his work done by the utility, emanate from the federal law. A repeal of CACS may well strip existing competition provisions from state programs, even though the states will continue to implement their own CACS program, despite the repeal of CACS by Congress.

In Massachusetts, for example, ASA members were successful, after much effort, in having several tough protections against anticompetitive utility practices written into the Massachusetts State Plan. That Plan:

- prohibits utility auditors from recommending specific suppliers or contractors;
- utilities are prohibited from using audits to their advantage in marketing any products;
- utilities are prohibited from using CACS to generate sales leads.

The state of Massachusetts may well go ahead with their program, in face of repeal. The question that would remain, for Massachusetts wholesalers, is: can the state enforce the anticompetitive protections without the federal authority.

The American Supply Association endorses the position of the Alliance for Fair Competition that repeal of CACS must provide for continued authority to the states to enforce anticompetitive protections in energy conservation. Absent such provisions, our members will continue to be threatened by unfair and anticompetitive practices by utilities in commercial energy conservation.

Attachment 1

WASHINGTON GOVERNMENT AFFAIRS OFFICE
1919 Pennsylvania Ave., N.W.
Suite 300
Washington, D.C. 20006
202/223-6222

The National Association
of Full-Service Plumbing,
Heating, Cooling and Piping
Products Wholesalers

American Supply Association
221 N. LaSalle Street
Chicago, Illinois 60601
312/236-4082

Peter W. Schwartz
Executive Vice President

STATEMENT BY

DAVID CORCORAN,

VICE PRESIDENT OF THE AMERICAN SUPPLY ASSOCIATION

BEFORE THE

SENATE SMALL BUSINESS COMMITTEE

NOVEMBER 3, 1983

Mr. Chairman, thank you for your invitation to appear here today. I am David Corcoran, General Manager of the R. B. Corcoran Company in Hyannis, Massachusetts. I am Vice President of the American Supply Association and President of the Plumbing and Heating Wholesalers of New England.

The American Supply Association is the single, national association representing suppliers and distributors of plumbing, heating and cooling products to contractors, industrial, educational and institutional users. There are 1200 members of the Association who have four thousand locations in all fifty states.

ASA member companies are almost all small, family-owned businesses. In 1982, the typical company had sales of $4 million and showed a net profit--after taxes--of 1%. In New England, the typical company had sales of $3.64 million and an after tax profit of 1.4%. R. B. Corcoran fits these categories as myself, brother and sister are all actively involved in a second generation operation of like size but less profit.

Throughout the country, gas and electric utility companies have ventured from the production and distribution of energy into the sale, installation and service of gas and electric appliances, products and systems. In Hyannis, one of my major competitors is the Colonial Gas company. My number one product line in terms of dollars and profits is water heaters. While we purchase these items from a manufacturer for sale to a contractor, Colonial Gas will sell both to the contractor or direct to the consumer.

Over time the percentage of my sales in gas water heaters has dropped partially because of this direct competition to both of these markets.

Suppliers in every region of the country are threatened with direct and often intense competition from gas and electric utilities. This competition goes far beyond the limited scope of the Residential Conservation Service Program. RCS is a minor part of the utility involvement in my business.

My problem and that of my fellow members of the ASA is that we cannot compete with the unfettered ability of the utilities to use it's rate paying customers to subsidize the large marketing and advertising campaigns directed toward particular consumers and products. The question becomes load factors and usage not profit oriented sales because the key element is the utility rate not the gross margin on the particular product. Quite frankly, Senator, some of the products I sell are available through other channels than plumbing and heating supply houses, but these products are marketed with profit as the key. The policies at Sears-Roebuck are different because customer contact service levels are not profit protected by the monopoly status for the sale of gas and electricity.

I am not here to advocate protectionism or a reduction in competition. I welcome competition. Our industry thrives on competition as do all small businesses. My company and all of the companies in ASA have been built through initiative, hard work, the entrepreneurial spirit and fair competition. However, competition is only beneficial when all the participants have to play by the same rules. When a utility sells and installs appliances, its massive economic advantage subsidized through its rates and its optimal market position give it a competitive advantage beyond my reach. I don't believe it is in anyone's best interest to allow a regulated business to encroach undeterred on the unregulated sector. A utility company should not be allowed to take the first penny of ratepayer money and divert it to compete unfairly with unregulated small businesses.

The utilities movement into my business is motivated by the fact that their job is to sell energy. Their competitor in the local market is the other utility - e.g., gas versus electric. They are engaged in a constant battle to maintain customers, increase energy sales and convert customers from their competitor's energy source.

Indicative of the fierce competition between the various energy sources is the amount of money that goes into promotion. Ask the witnesses here today from EEI and AGA what their yearly advertising budgets are for selling the benefits of gas and electricity.

The only way you have a market for gas and electricity is to have the equipment at the end of the gas line or the electric cable. For example, a major consumer of energy is a hot water heater. Every residence and every commercial and industrial establishment has a hot water heater of some type on sight. A building owner can choose to heat his water with either gas or electricity. It is this competition for the customer's business which leads utilities into the appliance business.

There are utilities which promote the benefit of their energy source and then depend on the private sector to market the appliances. Cooperative advertising programs, product displays, referrals, etc., have developed constructive relationships between utilities and private suppliers and contractors. Our problems come when a utility company decides that suppliers and contractors aren't doing the job, and they step in to exert control over the appliance market.

Gas utilities actively merchandise when supplies of gas are plentiful. Electric utilities merchandise whenever they have excess capacity. When supplies are tight, as in the seventies, gas utilities then back off their merchandising programs. Utilities will offer attractive deals packaged as energy conservation to protect against the possibility of the conservation-minded consumer defecting to a new way of heating his home.

Let me talk specifics. In Ohio, East Ohio Gas Company will actually give the homeowner free of charge a gas hot water heater if the homeowner agrees to convert from electric or gas.

In Hyannis, the cost of running a new gas line to your home is reduced by the number of appliances put on that line. The quoted price for 100 feet of gas line is $475. If you heat with gas, it is reduced by 50%. If you heat your water with gas, the cost is reduced by another 25% and with a third gas appliance, the cost is $0.

In a 1978 rate case, Boston Gas, D.P.U. 19470, the company made the following boast in their company brief:

> As Mr. Dodge testified, the rental program was an unqualified success . . . . By 1970, annual conversion has reached 6000, fully twice the average of the years prior to the institution of the rental program. (Company Brief, p.58, 59)

And, in answer to a question regarding the present benefits of their rental program, Boston Gas stated:

> ... we may come in a year from now and say we think we need a rental program again because it makes sense in the light of current marketing conditions. But I'm saying right now our judgment, at least over the last few years, has been that we don't need the rental program to sell the available load. (Company Brief, p.60)

When the utilities determine that the private sector cannot be depended on, they move in. Using low cost financing, rentals, free installation, low cost maintenance programs, these utilities attempt to cut the small businessman out of the market.

When utility companies venture into traditional wholesale, retail and contracting functions they must be closely scrutinized because:

(1) Such programs are often and easily subsidized by passing through part of the costs to all ratepayers. A utility's rates will often absorb many of the research, development, administrative, marketing and product costs.

(2) When competing head to head with small businesses for the same customer, utilities--because of their protected monopoly status--enjoy a massive marketing advantage through their penetration into every home, office building and factory.

(3) Utility involvement in sales, installation and service of gas and electric products and systems to their customer base ensures a continued demand for their primary product to those same customers--energy.

Appliance operations of a utility are, however, rarely subject to the kind of scrutiny necessary to prevent anticompetitive effects on small business competitors or ratepayer subsidization of the appliance program. Traditional regulation of utilities does not adequately review pricing practices, marketing practices and ratepayer subsidies.

Contrary to what some believe, utilities throughout the country are actively and extensively engaged in merchandising programs. Included with my testimony are three items:

- A May 1981 survey by the Edison Electric Institute which indicates that out of 34 possible areas for diversification by utilities, appliance merchandising ranks sixth.

- A 1978 American Gas Association survey in which 64% of the respondents were actively engaged in merchandising.
- A list of utilities throughout the country identified by ASA members as being in direct competition.

This last item is supplemented with a map which graphically displays the extent of utility merchandising programs across the country.

In our local market, I believe that where gas is available it should be the primary energy source and I have even converted my own home to this end. But it bothers me no end each month when I pay the several gas bills for both business and home and realize that I am subsidizing direct competition.

One of my contractors had the gas company install a conversion burner in his home because the monthly rental fee, plus the free piping would cost him less than he could do it himself.

In 1980, Cape Cod Gas Company, as it was called then, put out an advertising brochure mailed to 86,000 consumers advertising specific products, among then water heaters, appliances, heating equipment, etc. This was done in connection with a radio station and advertising agency where if you bought space in the brochure you received radio spots, as well. I tried to put two competing products in that brochure and was turned down. Now, I cannot directly blame the utility for making this decision but how could I, as a small businessman, even begin such a massive marketing campaign for my products? I have neither the staff, the mailing lists, the captive audience or the funds because I cannot receive a guaranteed profit at year end.

Additionally, there have been instances recently where a consumer has approached the gas company for installation of service for an upcoming conversion. His contractor has bid the job with equipment supplied by myself or other wholesalers. The gas company has taken this request for service, recommended a second bid and sent one of its sub-contractors over to bid the job. They would, therefore, not only get the gas usage but supply the equipment as well.

There are further instances of service contracts available from the utilitites on equipment which are below market levels and are intended to capture the replacement market on gas equipment. This major marketing effort strikes at the very heart of the contractors business and could destroy the fabric of the service industry.

Mr. Chairman, my experience in Hyannis is repeated throughout the state of Massachusetts.

Bay State Gas Company in Massachusetts rents hot water heaters to residential customers for $8.50 a month. The rental price includes installation and maintenance. Bay State offers commercial and industrial customers leasing and rental programs for small conversion burners, large heating equipment and burners, and water heating equipment. I have here with me a direct mail promotional piece mailed this year by Bay State to commercial and industrial customers. At several points in this package it is stated: "And thanks to our leasing and rental programs, your business can enjoy efficient gas heat with no capital investment."

The impact of Bay State's program is significant. In 1980, a supplier in Brockton, Massachusetts sold 300+ gas conversion burners, In 1981, Bay State began its rental program and his sales of gas conversion burners dropped to a total of 10 - a loss of 290+ sales because of competition from Bay State.

In Fall River, Massachusetts, Fall River Gas Company rents and sells gas hot water heaters to residential and commercial users. A supplier in Fall River puts it very simply: "The monthly rental fee in my opinion is so low it discourages homeowners and commercial users from buying and owning their own equipment."

Other utilities competing with suppliers in Massachusetts include

Massachusetts Electric
Commonwealth Gas
Commonwealth Electric
Lowell Gas
Boston Gas
Berkshire Gas
Valley Gas
Eastern Edison Electric
Haverhill Gas
Fall River Gas Company

The impact of these utilities on the marketplace is often dramatic. Information obtained from recent Massachusetts Department of Public Utility rate proceedings shows that:

- Bay State Gas Company's revenue from rental of appliances was $2,206,036 in 1982; there are 21,744 rental water heaters in place in homes and, in 1981, the value of rental appliances on customer property was $7,056,164;

- In 1981, Haverhill Gas had 11,000 residential rental water heaters and 552 conversion burners in place. Forty-nine percent of homes with gas hot water were using rental equipment.
- In the late 70's Boston Gas had 28,924 rental residential water heaters in place in homes.

Suppliers and distributors in Massachusetts are not alone in having to compete with large utilities and to do so without effective oversight of the utility's appliance operation. Senator, in Connecticut, Connecticut Power and Light merchandises and rents equipment. Until recently, the rental fee to a homeowner for a hot water heater was only $2.50 a month. CP&L will also sell you an insulation blanket for your hot water heater at $5.00 (roughly $17.50 below the market price), and they will even give you the insulation blanket free if you rent from CP&L.

The Department of Public Utility Control in Connecticut provides no written guidelines to ensure that costs of appliance programs are not borne by ratepayers. Rather, utilities are simply admonished to properly allocate costs. The Department takes no look at the possible impact on small business competitors, because it only regulates the monopoly business of the utility, not non-monopoly parts of the utility's business.

Although I have included with my testimony a detailed discussion of the Massachusetts Department of Public Utility's role in utility appliance sales and rental programs, I will summarize that discussion. The authority of the DPU over an appliance business of a utility is limited. Currently, no prior approval is required to engage in such a business. DPU differentiates between the sale of an appliance and the rental of an appliance. Appliance sales are considered to be non-utility operations. The utility can sell appliances, but cannot allocate any of the expenses or revenues associated with those sales to the ratepayers. The utility can utilize its personnel, equipment and overhead for its sales program, as long as the utility allocates the costs properly. However, there are no specific guidelines or written policies to govern how costs are allocated and, ultimately, the DPU has to accept the utility's allocation as final. Beyond this, DPU has no authority or oversight function over the appliance sales program. Since it is a non-utility business, DPU cannot interfere with it in any way.

Appliance rentals, on the other hand, receive different treatment. For the most part, rental programs are treated as a utility function. Revenues and expenses associated with rentals are passed through to ratepayers. All rental appliances in inventory and in residences and business establishments are treated as utility property and included in the rate base. For example, if a utility is allowed a 14% rate of return on investment (rate of return is then put into the consumers utility rates), the utility can charge all ratepayers $14 for every $100 of rental appliances in use.

As an intervenor in ratemaking hearings, the Massachusetts Attorney General has consistently challenged the treatment of rental programs as part of the rate base - but usually to no avail. DPU's benchmark decision on the treatment of rental programs came in a 1978 rate case, Boston Gas, D.P.U. 19470, where the DPU rejected the Attorney General's argument that the rental program should not be treated as part of the gas utility operation.

The limitations on this process are significant and leave the DPU as an ineffective forum for dealing with the problems which inevitably arise from utility involvement in appliance businesses. The authority of the DPU is confined to looking at the propriety of cost allocations - and the effectiveness of this function is greatly diminished by the absence of any strict or clearcut guidelines to direct the allocation of costs. Moreover, there is absolutely no consideration given to the impact of the utility's appliance operation on the competitive marketplace.

Like Massachusetts, the primary role of the public utility commissions (PUCs) in other states has been to ensure that the ratepayers are not subsidizing the utility's unregulated business activities. Effectiveness of this regulation has not been uniform among the states. State public service commissions often lack the staff and resources necessary to prevent cross-subsidization. Further, there is no uniform agreement as to what cross-subsidization is or what it entails. Thus, cost allocations are largely left to the discretion of the utility.

While some PUCs either have the specific authority or have interpreted their authority as allowing them to look at competition, most PUCs have refused to consider claims based on competitive harm. Utility marketing and pricing practices are considered to be outside a state regulator's authority. As the Federal Trade Commission stated in the Bureau of Competition Working Paper "Competition and Utility Cross-subsidization of Energy Conservation Practice"

> "There are at least two reasons for this position. First, there is no specific mention of competition in unregulated markets in PUC authorizing statutes; from this absence and the monopoly statutes of utilities, PUC officials may have drawn the conclusion that they are unable to consider competition policy. Second, until recent years, regulated businesses were generally thought to be exempt from antitrust laws, under the state action doctrine enumerated in Parker v. Brown....Although as discussed in Canton v. Detroit Edison and subsequent cases the Supreme Court has significantly modified the doctrine, the states have not fully adjusted to this change."

In a recent proceeding before the New York State Public Service Commission (PSC), suppliers and contractors attempted to raise competitive arguments in opposition to a petition filed by Long Island Lighting Company to create LILCO Energy Systems. The decision by the New York PSC was:

> "To assist the parties in preparing their evidentiary submission, we wish to emphasize that testimony which soley concerns the effects on competitors of the entry into the market of LILCO Energy Systems, Inc., is not of interest to the Commission in this proceeding." (State of New York Public Service Commission, order

granting Requests for Evidentiary Hearings, Issued January 13, 1982.)

Even upon vigorous appeal by the New York Attorney General of this determination, the New York Public Service Commission refused to consider the impact on small business competitors.

Where effective state regulation is lacking, the federal regulator must be prepared to fill the void. The Federal Trade Commission, through Section 5 of the Federal Trade Act, has the authority to look at unfair trade practices.

However, absent a directive from the Congress, we don't believe that the FTC is likely to take action under Section 5. The FTC relies on broad economic theories to define unfair competition and deceptive practices. A member of the Alliance for Fair Competition--the National Oil Jobbers Council--has repeatedly turned to the FTC for relief under Section 5, yet have never been successful in their efforts.

Nor do the courts offer a solution to the problem. Litigation is expensive and time-consuming. A case in point: In Oklahoma, electrical contractors have battled in courts for over seven years and still their case, brought under Section 2 of the Sherman Act and Sections 4 and 16 of the Clayton Act, has not been settled. For a supplier to take a utility company to court, his legal costs have to come out of his bottom line while the legal fees incurred by the utility can be passed on to all ratepayers.

Senator Weicker, the maintenance of competitive markets is a valid public policy concern. Unless a utility's entry into my business or into any other small business is subject to terms and conditions to preclude cross-subsidization and anti-competitive practices, then the utility should not be allowed to cross the line from regulated to unregulated businesses. The current mess with the telephone companies is an example of the difficulties which can arise when a regulated entity disrupts the competitive marketplace by providing not only its service, but the products better supplied by the competitive distribution process. We should not let the regulated energy suppliers disrupt the market for the products currently supplied by competitive suppliers and contractors in the United States.

The proposals offered by the Chief Counsel, Frank Swain, are positive approaches. But they require commitments from the Congress, federal agencies and the states to see that these proposals move past this hearing.

Senator, 15 years ago suppliers testified before the House Small Business Committee because of these very same problems of competition from utilities. I am here today because the problem for small business still exists in even greater force.

I sincerely hope that this hearing need not be repeated in 1998.

Thank you again for affording me this opportunity to appear before you today.

Investor-Owned Electric Utility New Business Ventures: A Survey of Utility Diversification Activities

Table 2
Summary of Results
Business Diversification Survey

Type of Venture	Number of Ventures	Percent of Total	Operational	Planned	Inactive	Subsidiaries	Regulated	Jurisdiction** State	Jurisdiction** Federal
1. Fuel Exploration and Development	75	30%	72	0	3	67	36	25	25
2. Real Estate	31	13%	30	0	1	24	3	2	1
3. Energy Conservation Services	22	9%	16	5	1	5	2	2	0
4. District Heating	15	6%	12	2	1	7	1	1	0
5. Cogeneration	14	6%	8	6	0	2	1	1	0
6. Appliance Sales/Leasing/Service	13	5%	13	0	0	0	-	-	-
7. Fuel Transportation/Transloading	11	4%	11	0	0	10	9	1	8
8. Load Management Controls	9	4%	9	0	0	1	1	0	1
9. Aquaculture	7	3%	6	1	0	1	0	-	-
10. Customer Billing/Collection Services	4	2%	4	0	0	2	0	-	-
11. Project Management/Engineering/ Consulting Services	4	2%	3	1	0	2	0	-	-
12. Solar/Renewable Product Sales	4	2%	2	2	0	0	-	-	-
13. Synfuels Projects	4	2%	1	3	0	4	2	2	1
14. Equipment Wholesaling	3	1%	3	0	0	3	0	-	-
15. Waste Product (Ash) Sales	3	1%	3	0	0	0	-	-	-
16. Energy Education Services	3	1%	3	0	0	1	1	0	1
17. Materials Testing/Quality Control	2	1%	2	0	0	1	1	-	1
18. Thermal Storage Projects	2	1%	0	2	0	1	0	-	-
19. Water Rights/Storage	2	1%	2	0	0	2	2	2	1
20. Water Sales/Distribution	2	1%	2	0	0	2	2	2	0
21. Computer Software Sales	2	1%	2	0	0	1	0	-	-
22. Commercial Paper Sales	2	1%	2	0	0	0	-	-	-
23. Telphone/Telecommunications	2	1%	2	0	0	2	2	2	2

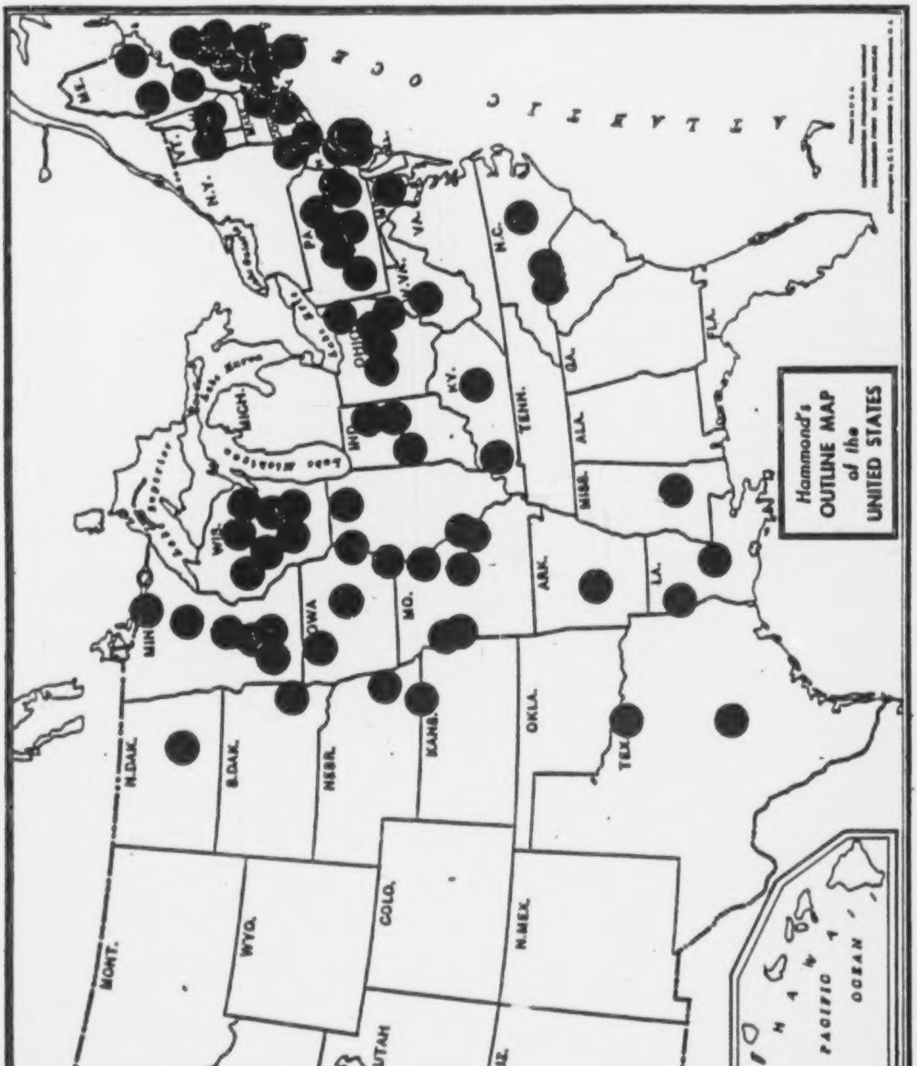
1978 Survey of A.G.A. Gas Utility
Merchandising Companies

TABLE 1

GAS UTILITIES MERCHANDISING IN 1978
BY TYPE OF COMPANY

Type of Company	Number of Companies Merchandising	Number of Stores	Number of Residential Customers	No. of Companies Servicing Appliances	Actively Cooperate With Dealers
Gas Utilities	85	1,188	11,052,504	82	71
Gas & Electric Utilities	13	174	2,925,432	13	10
Municipal	2	10	523,806	2	2
Canadian	3	37	587,000	3	3
TOTAL	103	1,409	15,088,742	100	86

Gas and Electric Utilities In Direct Competition With Suppliers


Hammond's OUTLINE MAP of the UNITED STATES
ATLANTIC OCEAN
PACIFIC OCEAN
ME.
VT.
N.Y.
PA.
VA.
W.VA.
N.C.
OHIO
MICH.
IND.
KY.
TENN.
GA.
ALA.
FLA.
MISS.
WIS.
MINN.
IOWA
MO.
ARK.
LA.
N.DAK.
S.DAK.
NEBR.
KANS.
OKLA.
TEX.
MONT.
WYO.
COLO.
N.MEX.
UTAH
ARIZ.
IDAHO
WASH.
ORE.
NEV.
CAL.
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
HAWAII
PACIFIC OCEAN
ALASKA
ARCTIC OCEAN
BERING SEA

October 25, 1983
Memorandum Re: Utility Appliance Programs in Massachusetts

Under Massachusetts law, the authority of the Department of Public Utilities (DPU) over an appliance business of a utility is limited. Generally, no prior approval is required for a utility to engage in such a business. Nor is DPU charged with any oversight function over the appliance business itself. The only issues which have arisen have occurred in the context of ratemaking hearings where the issue has centered around the propriety of cost allocations. The impact of these appliance programs on small business competitors has not been a consideration.

As early as 1949, the Massachusetts courts ruled that the appliance sales operations of utilities are non-utility operations.[1] Therefore, the utility cannot include the expenses from the appliance sales business in determining its rate base and its cost of service for rate-making purposes (in other words, ratepayers will not bear the costs of a utility's appliance sales operation). However, the DPU has never set forth any specific guidelines or written policies to govern how costs should be allocated and, ultimately, the DPU must accept whatever the utility says is a fair allocation.

Appliance rental programs have evolved somewhat differently. DPU, for the most part, treats them as a part of the utility business for ratemaking purposes. What this means is that the utility will get a rate of return on inventory, as well as appliances in customers' dwellings, while all ratepayers will pay the costs associated with the utility business.

In 1978, in the ratemaking hearing, Boston Gas, DPU 19470, the treatment of appliance rental programs was squarely faced by the DPU. The Massachusetts Attorney General - who regularly intervenes in ratemaking cases - argued that Boston Gas' appliance rental program should not be treated as a part of the Company's gas utility operations. Instead, the Attorney General urged that DPU treat the appliance rental program in the same way as an appliance sales program. Thus, the Attorney General argued for the removal of all rented appliances from the rate base and all related revenues and expenses from the cost of service.

The Commission rejected the Attorney General's argument, ruling that appliance rental programs require different treatment than sales for two basic reasons: 1) Account 386 of the Uniform System of Accounts for Gas Companies tacitly permits utility companies to engage in appliance rental operations,[2] and 2) Unlike the utilities in the earlier appliance sales decisions, Boston Gas had always treated all aspects of its rental program as part of its utility business. The inconsistencies which had plagued the sales programs were not present in Boston Gas' rental program. Therefore, the commissioners reasoned, the rental program should be treated differently from the sales program for ratemaking purposes.

Since Boston Gas, the Commission on several occasions has ruled on challenges to the propriety of various expense and cost allocations. In Bay State Gas, D.P.U. 777 (1982), the Attorney General disputed the inclusion in the cost of service of six different appliance-related expenses. The DPU ruled in favor of the utility on four of the six disputed expenses (amounting to over $300,000). One of the challenged expenses was the cost of servicing rental applicances, which the Commission permitted as a cost to be paid by ratepayers because of the utility's obligation to insure the safety of its customers.

The expenses associated with the appliance rental program of Haverhill Gas Company have been an issue over the years. The Attorney General tried unsuccessfully on two occasions to have the DPU move the program "below the line" for ratemaking, since the Attorney General contended the program was not as financially successful as the utility's figures indicated and, in fact, at times was being subsidized by ratepayers. Finally, in late 1982, the DPU agreed with the Attorney General that the program was not consistently carrying its own weight and would be placed below the line in the next rate case, Re Haverhill Gas Co., D.P.U. 1115 (1982).

Haverhill is a good illustration of the limited role of the DPU. First of all, their scrutiny is confined exclusively to looking at cost allocations. The DPU cannot delve into the appliance operation's business or marketing practices. Nor are they concerned with the impact on the competitive marketplace. The DPU never even glanced at the effect of Haverhill renting water heaters to over 11,000 residences upon small business competitors.

Secondly, in looking at cost allocations, the DPU relies entirely upon the Uniform System of Accounts. While this system mentions gas appliance businesses and what categories various expenses should fall into, it simply is not designed to guard against impermissible cross-subsidization or to prevent the utility from using its position to dominate the marketplace. Beyond this system of accounts, there are no clearcut written policies which guide the utilities in how they separate the costs of the appliance business from the utility and how transactions between the appliance business and the utility are to be conducted.

The result of all this is that the conduct of the utility's appliance business is not being given the kind of scrutiny it should have. Nor does the system provide meaningful protections and explicit ground rules to prevent subsidization by ratepayers and anticompetitive practices by the utilities.

FOOTNOTES

1. See: *Lowell Gas Company v. D.P.U.*, 324 Mass. 80, 99 (1949) and *Boston Consolidated Gas Company* v. *D.P.U.* , 327 Mass. 103, 108-112 (1951).

2. *Boston Gas*, DPU 19470(1978) at p. 7.

Attachment 2

WASHINGTON GOVERNMENT AFFAIRS OFFICE
1919 Pennsylvania Ave., N.W.
Suite 300
Washington, D.C. 20006
202/223-6222

The National Association
of Full-Service Plumbing,
Heating, Cooling and Piping
Products Wholesalers

American Supply Association
221 N. LaSalle Street
Chicago, Illinois 60601
312/236-4082

Peter W. Schwartz
Executive Vice President

STATEMENT
OF THE
AMERICAN SUPPLY ASSOCIATION

PRESENTED BY
JAMES A JOHNSON

BEFORE THE
SUBCOMMITTEE ON ANTITRUST & RESTRAINT OF TRADE

COMMITTEE ON SMALL BUSINESS
U.S. HOUSE OF REPRESENTATIVES
MAY 22, 1984

Mr. Chairman, thank you for your invitation to appear here today. I am Jim Johnson, President of Midway Supply Corporation. Midway Supply is celebrating it's 30th year in 1984 and serves southern Indiana as a wholesale distributor to retail merchants, dealers, and installing contractors.

Our product line includes plumbing, heating, air conditioning, piping, appliances, and kitchen cabinets. We are a traditional type supply house in size, as well as product mix, with 17 employees and annual sales of $2,700,000.00. Our employees have a combined service of 130 years with the company and Midway has yet to lay off an employee, even though we are in a very cyclical business. We are also very proud of our standing in our community of Seymour, where we are located.

Midway Supply Corporation is a member of the American Supply Association. ASA is the single, national association representing suppliers and distributors of plumbing, heating and cooling products to contractors, industrial, educational and institutional users. There are 1200 members of the Association with four thousand locations in all fifty states. ASA member companies are almost all small, family-owned businesses. In 1982, the typical company had sales of $4 million and showed a net profit--after taxes--of 1%.

My company is also a member of the Central Wholesalers Association, which represents the States of Ohio, Indiana, Kentucky, West Virginia, as well as parts of Illinois and Pennsylvania.

Like a blitzkrieg throughout the country, gas and electric utility companies are venturing from the production and distribution of energy into the sale, installation and service of gas and electric appliances, products and systems. Wholesalers and suppliers throughout the country are seeing their profits decrease and their businesses threatened as utilities have become our direct competitors. As an attachment to my testimony, I have enclosed a list of utilities identified by ASA members as being in direct competition. This last item is supplemented with a map which graphically displays the extent of utility merchandising programs across the country.

Today, we at Midway Supply, as well as our customers, are greatly concerned. This concern stems from the fact that Indiana Gas Company has entered the retail sales of products that are currently sold through existing channels. Indiana Gas' merchandising program includes hot water heaters, gas grills, dishwashers, ranges, washers and dryers. I have included an announcement of this venture (as Appendix "B"), that appeared in the Seymour Daily Tribune on Tuesday, November 8, 1983, as well as additional advertisements which have appeared in the Seymour Daily Tribune.

There are several interesting observations that can be made from these advertisements:

1. Indiana Gas is selling some items which cannot be connected to a gas service. Note in Appendix "C" that they mention dishwashers which require no gas.

2. The total amount of the purchase can be added to the customers monthly gas bill. Appendix B, C, D, E, G, H. There is a great

advantage to the ease in which they can do this with no credit application, no waiting period, or no credit card possession.

3. The gas company offers 30 days no interest on purchases (See Appendix "C"). In comparison shopping, we found that the gas company was actually allowing 90 days no interest and Appendix "I" shows this in the handwriting of the sales person whose card is shown in Appendix "J".

4. The interest rate on the installment purchase is considerably below the going rate in our area. Appendix "I" shows not only 90 days at no interest, but shows additionally a full year at 9.9%. The monthly payment shown at the right of Appendix "I" indicates an interest rate below 10% for all three years on not only the unit, but the installation cost, as well. Comparable interest rates on consumer loans in our area since mid-November run as follows:

Bank Consumer Loans	16 - 18%
Finance Companies	21 - 24%
Bank Credit Cards	19 - 21%

The 9.9% runs not only far below the going consumer rate but also 20% or more below the prime rate in our area.

5. The advertising of the gas company changed. They previously were doing informational type of advertising every Tuesday, which is generally permitted to be charged to the ratepayer (See ad in

Appendix "A"). After Tuesday, November 8, 1983, this Tuesday space was used to promote sales of appliances, dishwashers, water heaters, etc.

Appendix D, Tuesday, November 15, 1983
Appendix E, Tuesday, December 20, 1983
Appendix F, Tuesday, January 10, 1983
Appendix G, Tuesday, February 7, 1983
Appendix H, Tuesday, February 14, 1983

It appears they purchased a block of ads to run on Tuesday and diverted the space to the retail sales of appliances, water heaters, etc.

Additional concerns are that the installing contractor receives an installation fee only and is denied the mark up on the unit. The gas company has a pre-qualifying system to place a contractor on their installation list. Then the gas company selects whomever they choose to install the sale. This removes the potential customer from the market place of the contractor, dealer, and the retail store. Moreover, it is all done at below the going interest rate.

The gas company indicates they are using in-house service people, who regularly perform other tasks for the utility, to service the products the utility is retailing. This seems to be a subsidized service department.

We use Seymour as an example, but similar examples could be found for nearly all communities serviced by Indiana Gas. We feel our industry is a very efficient, cost effective, and service oriented network. We also know how slim our profit margins are. Competition of the nature that a utility brings to our market place is devastating.

My concern is that the Indiana Gas Company has far more financial resources than we and our dealers have. Plus, the gas company has a "lock" on all those who purchase gas from them when they are in the market for a new appliance. I also feel the gas company can easily use the entire retail product sales area as a way to sell gas and then roll those losses into their accounting to affect their rate base.

To the Indiana Public Service Commission, their treatment of a utility's appliance merchandising business is fairly cut and dry. No prior approval is required to engage in merchandising and jobbing. And because it is a non-utility operation, the PSC has no authority over how that business is run, or its effect upon small business competitors. The only requirement is that all costs associated with the appliance business must be kept separate from the utility operation. In other words, the expenses and revenues are "below the line" for ratemaking purposes.

The utility can utilize its personnel, equipment and related overhead costs for its sales program, as long as the utility allocates the costs. However, there are very few written guidelines or policies to govern specifically how costs are to be allocated. And, over the years, these cost allocations have rarely been challenged. Advertising costs are the one area which have, on occassion, been disallowed. This has occurred when the utility charged to the ratepayer the costs (in one case amounting to nearly $150,000) of advertisement promoting the products of the utility's appliance business.

Because of the lack of clearcut written guidelines and because the Indiana PSC considers the dollar amount involved too inconsequential to merit strict scrutiny, there are many hidden costs of the appliance business which will be absorbed by the utility. For example, the cost of a flyer inserted in the monthly gas bill is not likely to be borne by the appliance business. Nor will they have to pay for the expense of delivering an appliance when the utility's trucks are used. These kinds of costs are not easily allocated and with limited resources available, the PSC does not devote the necessary attention to seek out such costs and make certain they are kept separate.

According to the Indiana PSC, the utility appliance businesses are not profit-making endeavors, with most barely making it past the break-even point. Their intent in having the business is to promote the use of gas, not to build a successful appliance merchandising business. Therefore, the utility can sell the appliances at below cost, provide below market financing and generally offer enticing deals which no competing small business can possibly match.

A review of the Indiana law reveals there is no clear statutory authority for the Indiana Public Service Commission to examine the effect of non-utility operations on small business competitors. However, in a recent order of PSC, where utilities were permitted to begin a below market financing program (subsidized by ratepayers) for weatherization measures, the PSC did look at the competitive impact on other utilities. In deciding to exclude furnace replacement and active solar measures from the program, the Commission noted the "high level of competition concerning heating equipment and choice of heating systems," giving as examples NIPSCO's marketing of gas pulse combustion furnaces and IPL's heat pump market drive. Because of this, such measures were excluded from the weatherization loan program and the Commission reasoned:

> "It is at least conceivable that a customer might receive a Weatherization Program loan from a utility only to install a new heating plant designed to use the service of another competing utility. In other words, the utilities might be cutting their own throats. Even limiting furnace replacement to the same type of service as the utility providing the loan might constitute an unfair market advantage." Public Service Commission of Indiana, Cause No. 37321, January 13, 1984, p.6.

My problem and that of my fellow members of the ASA is that we cannot compete with the unfettered ability of a utility to use it's rate paying customers to subsidize, whether directly or indirectly, the marketing and advertising campaigns directed toward particular consumers and products. I am not here to advocate protectionism or a reduction in competition. I welcome competition. Our industry thrives on competition as do all small businesses. My company and all of the companies in ASA have been built through initiative, hard work, the entrepreneurial spirit and fair competition. However, competition is only beneficial when all the participants have to play by the same rules. When a utility sells and installs appliances, its massive economic advantage subsidized directly or indirectly through its rates and its optimal market position give it a competitive advantage beyond my reach. I don't believe it is in anyone's best interest to allow a regulated business to encroach undeterred on the unregulated sector. A utility company should not be allowed to take the first penny of ratepayer money and divert it to compete unfairly with unregulated small businesses.

The utilities' movement into my business is motivated by the fact that their job is to sell energy. Their competitor in the local market is the other utility - e.g., gas versus electric. They are engaged in a constant battle to maintain customers, to increase energy sales and to convert customers from their competitor's energy source.

Indicative of the fierce competition between the various energy sources is the amount of money that goes into promotion. I am sure that the witnesses here today from EEI and AGA would attest to the fact that their respective yearly advertising budgets are for selling the benefits of gas and electricity.

The American Gas Association, in written testimony to the Senate Small Business Committee in follow-up to that Committee's November 1983 hearings on utility competition, stated that their members are involved in merchandising gas appliances and equipment to "preserve and protect gas markets". The fact of the matter is that the only means for a utility to preserve and expand its market for gas or electricity is to have the equipment at the end of the gas line or the electric cable. For example, a major source of energy consumption is a hot water heater. Every residence and every commercial and industrial establishment has a hot water heater of some type on site. A building owner has the choice of heating with either gas or electricity. It is this competition for the customer's business which leads utilities into the appliance business.

At this point, I would like to say that there are indeed utilities which promote the benefits of their energy source but rely solely on the private sector to market the appliances. Cooperative advertising programs, product displays, referrals, etc., have developed constructive relationships between utilities and private suppliers and contractors. Our problems arise when a utility company decides that suppliers and contractors aren't doing the job and then steps in to exert control over the appliance market. Using low cost financing, rentals, free installation and low cost maintenance programs, utilities have an anticompetitive impact on free enterprise.

When utility companies venture into traditional wholesale, retail and contracting functions they must be closely scrutinized because:

(1) Such programs are often and easily subsidized by passing through part of the costs to all ratepayers. A utility's rates will often absorb many of the research, development, administrative, marketing and product costs.

(2) When competing head to head with small businesses for the same customer, utilities--because of their protected monopoly status--enjoy a massive marketing advantage through their penetration into every home, office building and factory.

(3) Utility involvement in sales, installation and service of gas and electric products and systems to their customer base ensures a continued demand for their primary product to those same customers--energy.

Appliance operations of a utility are, however, rarely subject to the kind of scrutiny necessary to prevent anticompetitive effects on small business competitors or ratepayer subsidization of the appliance program. Traditional regulation of utilities does not adequately review pricing practices, marketing practices and ratepayer subsidies.

As in Indiana, the primary role of the public utility commissions (PUCs) in other states has been to ensure that the ratepayers are not subsidizing the utility's unregulated business activities. The prevention of cross-subsidization is not uniform among the states. State public service commissions often lack the staff and resources necessary to prevent cross-subsidization. Further, there is no uniform agreement as to what cross-subsidization is or what it entails.

Cross-subsidization is difficult to define except in the most blatant cases. The difficulty in defining the term naturally leads to problems in regulating to prevent cross-subsidization. For any utility or public service commission to blithely say that appliance sales are "below-the-line", and not included in determining rates, ignores what a cross-subsidization is.

Cross-subsidization occurs when the utility provides financial, overhead or administrative assistance to the unregulated activity without the full market-based charge being imposed. This can include the underwriting of the costs and maintenance of equipment, personnel and office space. Such assistance can also take the form of the utility providing or obtaining noncompetitive financing for the unregulated activity, or the sharing of legal and accounting services.

Cross-subsidization can occur in the access to customer lists or credit information by the unregulated activity, or the use of the utility's billing, advertising or marketing resources without reimbursing the ratepayer at a market-based price. A cross-subsidy occurs when the unregulated activity conducts business using the name and identification of the utility, without reimbursement to the ratepayer.

In most states, anticompetitive and unfair practices are rarely addressed by public service commissions. While some PUCs either have the specific authority or have interpreted their authority as allowing them to look at competition, most PUCs have refused to consider claims based on competitive harm. Utility marketing and pricing practices are considered to be outside a state regulator's authority. As the Federal Trade Commission stated in the Bureau of Competition Working Paper "Competition and Utility Cross-Subsidization of Energy Conservation Practices":

> "There are at least two reasons for this position. First, there is no specific mention of competition in unregulated markets in PUC authorizing statutes; from this absence and the monopoly statutes of utilities, PUC officials may have drawn the conclusion that they are unable to consider competition policy. Second, until recent years, regulated businesses were generally thought to be exempt from antitrust laws, under the state action doctrine enumerated in Parker v. Brown...Although as discussed in Canton v. Detroit Edison and subsequent cases, the Supreme Court has significantly modified the doctrine, the states have not fully adjusted to this change."

In a recent proceeding before the New York State Public Service Commission (PSC), suppliers and contractors attempted to raise competitive arguments in opposition to a petition filed by Long Island Lighting Company to create LILCO Energy Systems. The decision by the New York PSC was:

> "To assist the parties in preparing their evidentiary submission, we wish to emphasize that testimony which solely concerns the effects of competitors of the entry into the market of LILCO Energy Systems, Inc., is not of interest to the Commission in this proceeding." (State of New York Public Service Commission, order granting Requests for Evidentiary Hearings, issued January 13, 1982.)

Even upon vigorous appeal of this determination by the New York Attorney General, the New York Public Service Commission refused to consider the impact on small business competitors.

Where effective state regulation is lacking, the federal regulator must be prepared to fill the void. To date, however, existing federal antitrust authority has not provided an effective deterrent or remedy to anticompetitive practices by utilities. Uncertainty of the applicability of federal antitrust statutes to utilities regulated by state agencies has limited the effectiveness of federal antitrust laws. Also, the costs of private antitrust action virtually eliminates such actions as a realistic option for a small business. Litigation is expensive and time-consuming. A case in point: In Oklahoma, electrical contractors have battled in courts for over seven years and still their case, brought under Section 2 of the Sherman Act and Sections 4 and 16 of the Clayton Act, has not been settled. For a supplier to take the utility company to court, his legal costs have to come out of his bottom line while the legal fees incurred by the utility can be passed on to all ratepayers.

We believe that the Federal Trade Commission, using Section 5 of the Federal Trade Act, has the authority to look at utility trade practices which may be unfair or anticompetitive. As you have heard today, the FTC has begun a preliminary investigation into utility competition with small businesses. We hope that this subcommittee will keep in close contact with the Bureau of Competition during the course of this investigation.

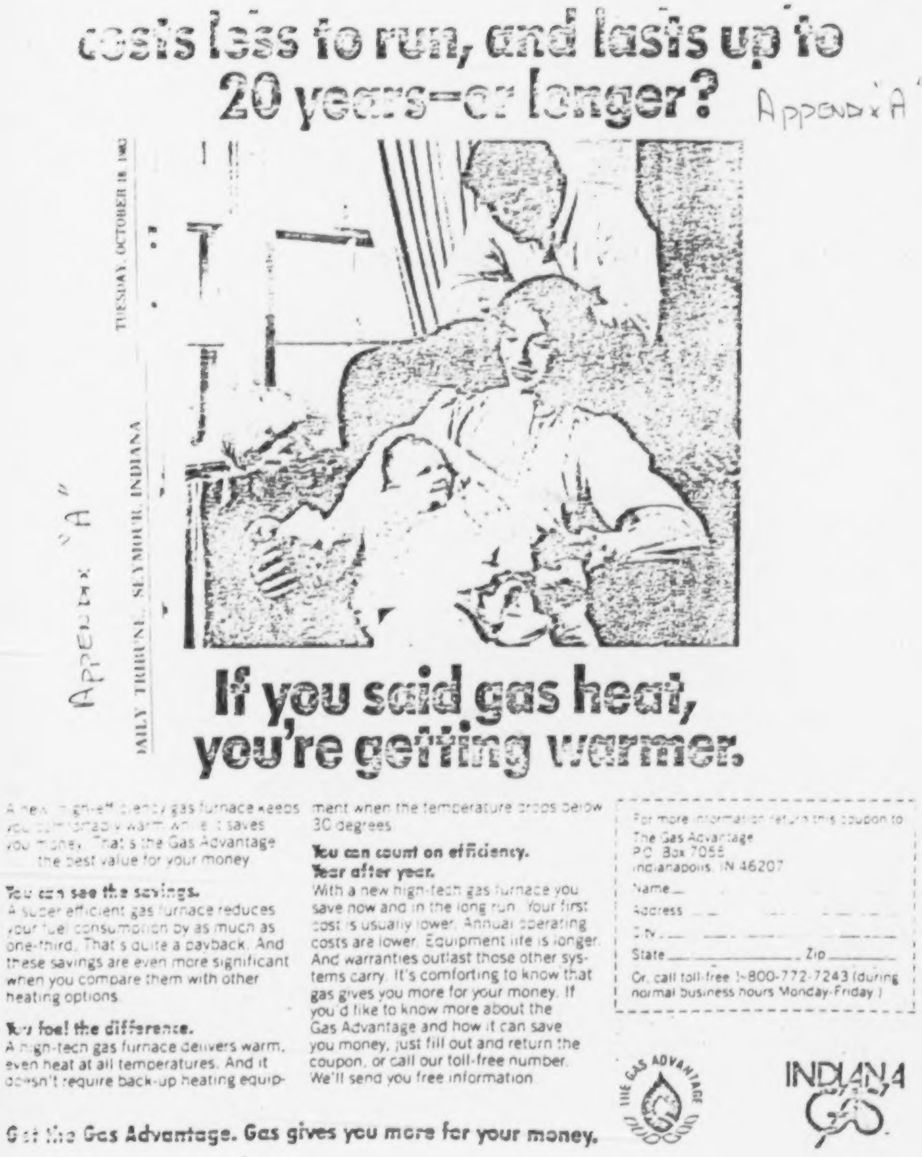
Mr. Luken, the maintenance of competitive markets is a valid public policy concern. Unless a utility's entry into my business or into any other small business is subject to terms and conditions to preclude cross-subsidization and anti-competitive practices, then the utility should not be allowed to cross the line from regulated to unregulated businesses. The current mess with the telephone companies is an example of the difficulties which can arise when a regulated entity disrupts the competitive marketplace by providing not only its service, but also the related products of that service which can be better supplied by the competitive distribution process. We should not let the regulated energy suppliers disrupt the market for the products currently supplied by competitive suppliers and contractors in the United States.

The proposals offered by the Chief Counsel, Frank Swain, are positive approaches. But they require commitments from the Congress, federal agencies and the states to see that these proposals move beyond this hearing.

Congressman, 15 years ago suppliers testified before the House Small Business Committee because of these very same problems of competition from utilities. I am here today because the problem for small business still exists in even greater force.

I sincerely hope that this hearing need not be repeated in 1998.

Thank you again for affording me this opportunity to appear before you today.



costs less to run, and lasts up to 20 years—or longer?

Appendix A"

DAILY TRIBUNE, SEYMOUR, INDIANA TUESDAY, OCTOBER 18, 1983

Appendix "A"

If you said gas heat, you're getting warmer.

A new high-efficiency gas furnace keeps you comfortably warm while it saves you money. That's the Gas Advantage the best value for your money.

You can see the savings.
A super efficient gas furnace reduces your fuel consumption by as much as one-third. That's quite a payback. And these savings are even more significant when you compare them with other heating options.

You feel the difference.
A high-tech gas furnace delivers warm, even heat at all temperatures. And it doesn't require back-up heating equipment when the temperature drops below 30 degrees.

You can count on efficiency. Year after year.
With a new high-tech gas furnace you save now and in the long run. Your first cost is usually lower. Annual operating costs are lower. Equipment life is longer. And warranties outlast those other systems carry. It's comforting to know that gas gives you more for your money. If you'd like to know more about the Gas Advantage and how it can save you money, just fill out and return the coupon, or call our toll-free number. We'll send you free information.

For more information return this coupon to:

The Gas Advantage
P.O. Box 7055
Indianapolis, IN 46207

Name ______

Address ______

City ______

State ______ Zip ______

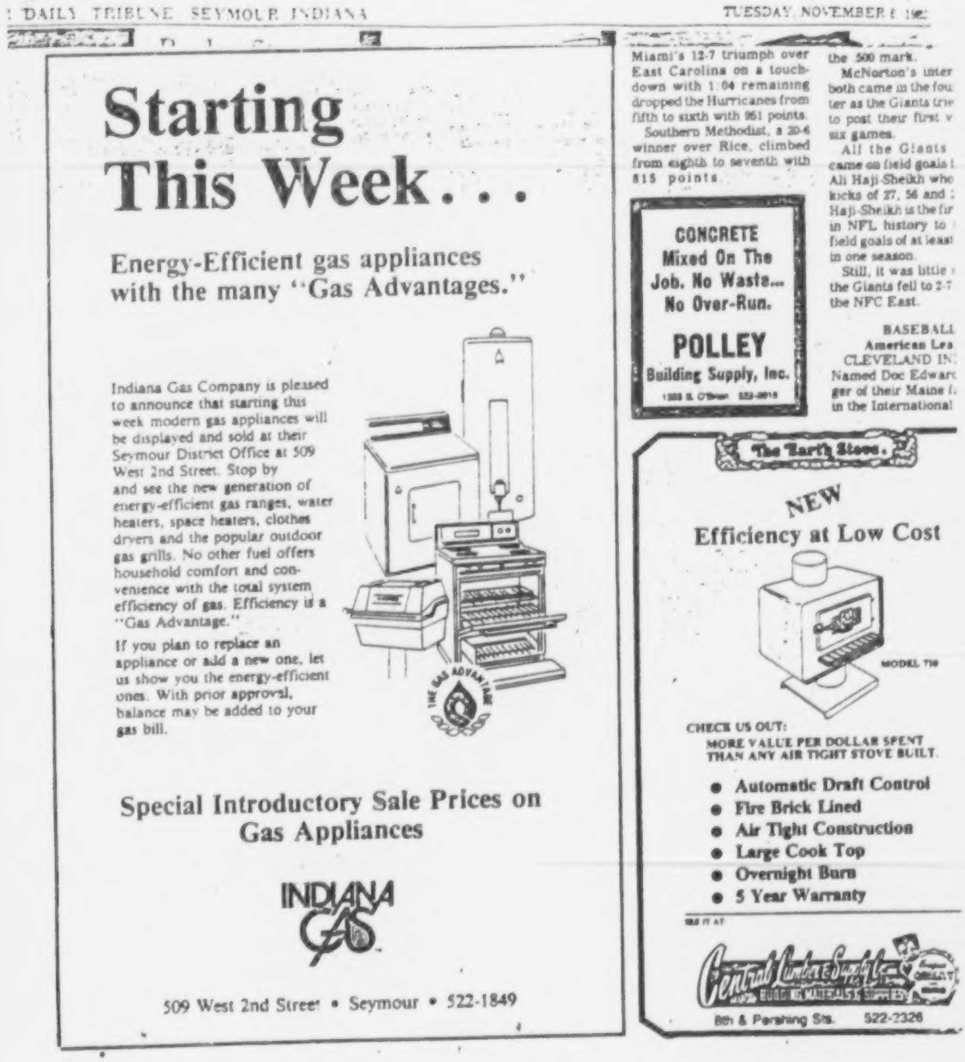
Or, call toll-free 1-800-772-7243 (during normal business hours Monday-Friday.)

Get the Gas Advantage. Gas gives you more for your money.

THE GAS ADVANTAGE

INDIANA GAS

Appendix B



DAILY TRIBUNE SEYMOUR INDIANA

TUESDAY NOVEMBER 8 198

Starting This Week...

Energy-Efficient gas appliances with the many "Gas Advantages."

Indiana Gas Company is pleased to announce that starting this week modern gas appliances will be displayed and sold at their Seymour District Office at 509 West 2nd Street. Stop by and see the new generation of energy-efficient gas ranges, water heaters, space heaters, clothes dryers and the popular outdoor gas grills. No other fuel offers household comfort and convenience with the total system efficiency of gas. Efficiency is a "Gas Advantage."

If you plan to replace an appliance or add a new one, let us show you the energy-efficient ones. With prior approval, balance may be added to your gas bill.

Special Introductory Sale Prices on Gas Appliances

INDIANA GAS

509 West 2nd Street • Seymour • 522-1849

Miami's 12-7 triumph over East Carolina on a touchdown with 1:04 remaining dropped the Hurricanes from fifth to sixth with 961 points.

Southern Methodist, a 20-6 winner over Rice, climbed from eighth to seventh with 815 points.

CONCRETE
Mixed On The Job. No Waste... No Over-Run.

POLLEY
Building Supply, Inc.

the 500 mark.

McNorton's inter both came in the fou ter as the Giants trie to post their first v six games.

All the Giants came on field goals l Ali Haji-Sheikh who kicks of 27, 56 and : Haji-Sheikh is the fir in NFL history to field goals of at least in one season.

Still, it was little the Giants fell to 2-7 the NFC East.

BASEBALL
American Lea
CLEVELAND IN
Named Doc Edwarc ger of their Maine f in the International

The Earth Stove.

NEW
Efficiency at Low Cost

CHECK US OUT:
MORE VALUE PER DOLLAR SPENT THAN ANY AIR TIGHT STOVE BUILT.

- Automatic Draft Control
- Fire Brick Lined
- Air Tight Construction
- Large Cook Top
- Overnight Burn
- 5 Year Warranty

Central Lumber & Supply Co.
BUILDING MATERIALS & SUPPLIES

8th & Pershing Sts. 522-2326

WEDNESDAY, NOVEMBER 9, 1983 SEYMOUR DA

Appendix "C"

DAILY TRIBUNE, SEYMOUR, INDIANA PAGE THREE

l planning
ɪg format

:ather ideas for the
vear and announce
s.
oard approved a
vision changing the
of the executive
e adding two new
broader coverage
ging the names of
ake them more rep-
e.
tive committee
now are president,
ident secretary-
and chairmen of
d, outside events,
nd grounds, lives-
bition carnival,
ns and inside ex-
l and FFA activi-
vomen's activities
s.
d granted permis-
H use of the Show
scales for its beef
identification program on Jan. 14, with alternate date of Jan. 21.

Three members offered resignations for personal reasons. They are Lester Darlage, Cliff Osterman and Ed Blish. On behalf of the board, Mrs. Erp expressed appreciation for their time and service to the fair.

Counting the three county commissioners who serve by virtue of their office, the fair board is comprised of 31 members. The membership committee will be meeting soon to present a slate of replacements, probably at the next board meeting at 7:30 p.m. Dec. 5.

ital

nts of a son

lenson, Norman
parent of a

dismissals
lip G. Miller,
n R6 admitted

nce S. (Sweany,
R2 admitted

:a O. Morgan,
31 Vallonia,
1

Yates, 29 W
orth Vernon,

INDIANA GAS COMPANY, INC.

Theresa Gabaree has been named Appliance Sales Representative for the Seymour District of the Indiana Gas Company. She can be reached during normal office hours, at the office, 509 W. 2nd Street, 522-1849. The gas company is featuring a line of energy-efficient gas ranges, water heaters, space heaters, clothes dryers and washers, dishwashers and gas grills. The appliances are available on a 30 day cash basis, or can be paid for monthly with a customer's gas bill.

EUREKA
EUREKA

special holiday prices!

EUREKA VACS

YOUR CHOICE!
$69.95

4-position Dial-A-Nap® cleans carpeting from low naps to high shags.
MODEL 1425

Complete 7-piece cleaning tool set included.

SUGGESTED LIST $129.95
MODEL 1461

Exclusive Vibra-Groomer® II beater bar brush roll loosens deep grit and ground-in dirt.
Brilliant headlight seeks out dirt.
Rugulator® sliding scale height adjustment cleans from low naps to high shags.

NOW $109.95
SAVE $20

A motor here
peak

Appendix "D"

[illegible]
...r the Rainbow."
...hoir will perform
...e direction of Keith

...al will include ham,
...ans, macaroni and
...east rolls, salad, de...
...a drink.
...are $4.50 and may
...ased from any chor...
...student, student
...member or in the
...e until noon Thurs...
...ckets will be sold at
...The doors will open

...r plans ...tor bid

...NAPOLIS (AP) — ... Republican State ... John Snyder says ... formally announce ...e is running for the ...an nomination for

...said Friday he will ...announcement dur...-day sweep of the ...ginning at 9 a.m. ...t the Indianapolis ...b

...who lives near Wil... Hancock County, ...state chairman in ...early 1972 before ...to let James Neal ...sville take over. ...as elected state ...in 1966 and in 1968.

...ng bill ...House

...NGTON (AP) — ...Indiana congress...o the majority as ...passed 224-188 an ...y spending bill to ...of the federal gov...running past mid...

...ats Katie Hall, Lee ...and Frank McClos...for the measure. ...Burton, R-Ind, did

...e Republicans ...mocrats voted for ...ule of Democrats ...epublicans voted

Monday births

Mr. and Mrs. Patrick D. Barnes, 802 Sprenger Road, are the parents of a daughter.

Mr. and Mrs. William Hendrix, Commiskey R1, are the parents of a son.

Monday dismissals

Mrs. Alma E. Schulz, Lutheran Community Home, admitted Oct. 30.

Guy R. Robertson, Brownstown R1, admitted Nov. 7.

Treated wood fuel dangerous

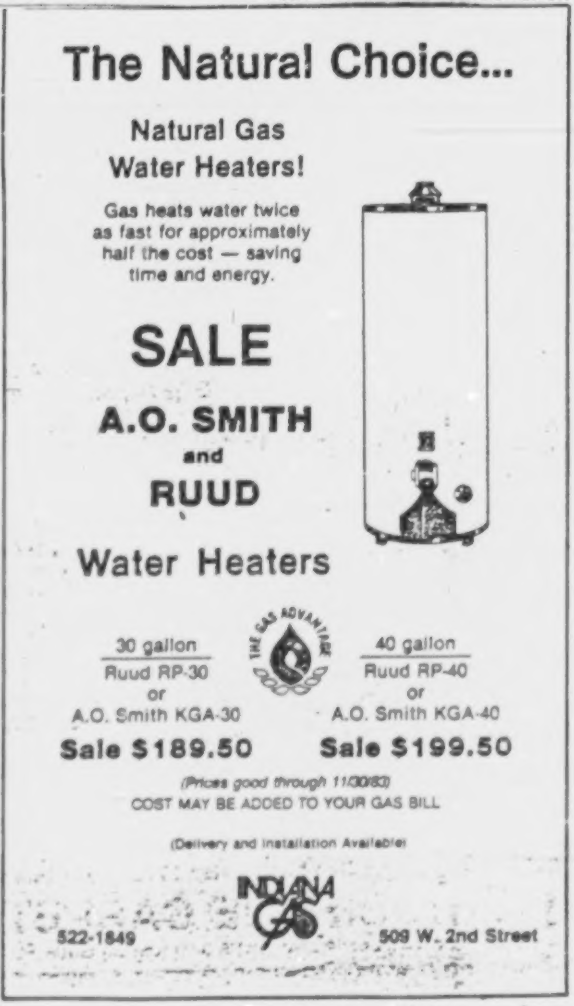
INDIANAPOLIS (AP) — Hoosiers who use chemically treated wood to heat their homes risk being poisoned by toxic substances released during the burning, Gov. Robert D. Orr's energy adviser says.

Orr aide Charles Coffee referred to wood marked, "Treated with chromate copper arsenate (CCA)" or "For below-ground use."

Recently, a rural family of eight who heated their home with a stove fueled with leftover scraps of CCA-treated wood and plywood had symptoms of copper, chromium and arsenic poisoning, he said.

Symptoms included bronchitis, pneumonia, ear infections, blackouts, stomach and intestinal ailments, nosebleeds, muscle cramps and rashes on the arms, legs and soles of the feet, Coffee said.

"Similar poisoning could occur in other homes where treated wood is burned frequently," he said. "Don't take a chance. Send your treated wood scraps to the garbage can."



The Natural Choice...

Natural Gas
Water Heaters!

Gas heats water twice as fast for approximately half the cost — saving time and energy.

SALE

A.O. SMITH
and
RUUD

Water Heaters

THE GAS ADVANTAGE

30 gallon	40 gallon
Ruud RP-30 or A.O. Smith KGA-30	Ruud RP-40 or A.O. Smith KGA-40
Sale $189.50	**Sale $199.50**

(Prices good through 11/30/83)
COST MAY BE ADDED TO YOUR GAS BILL

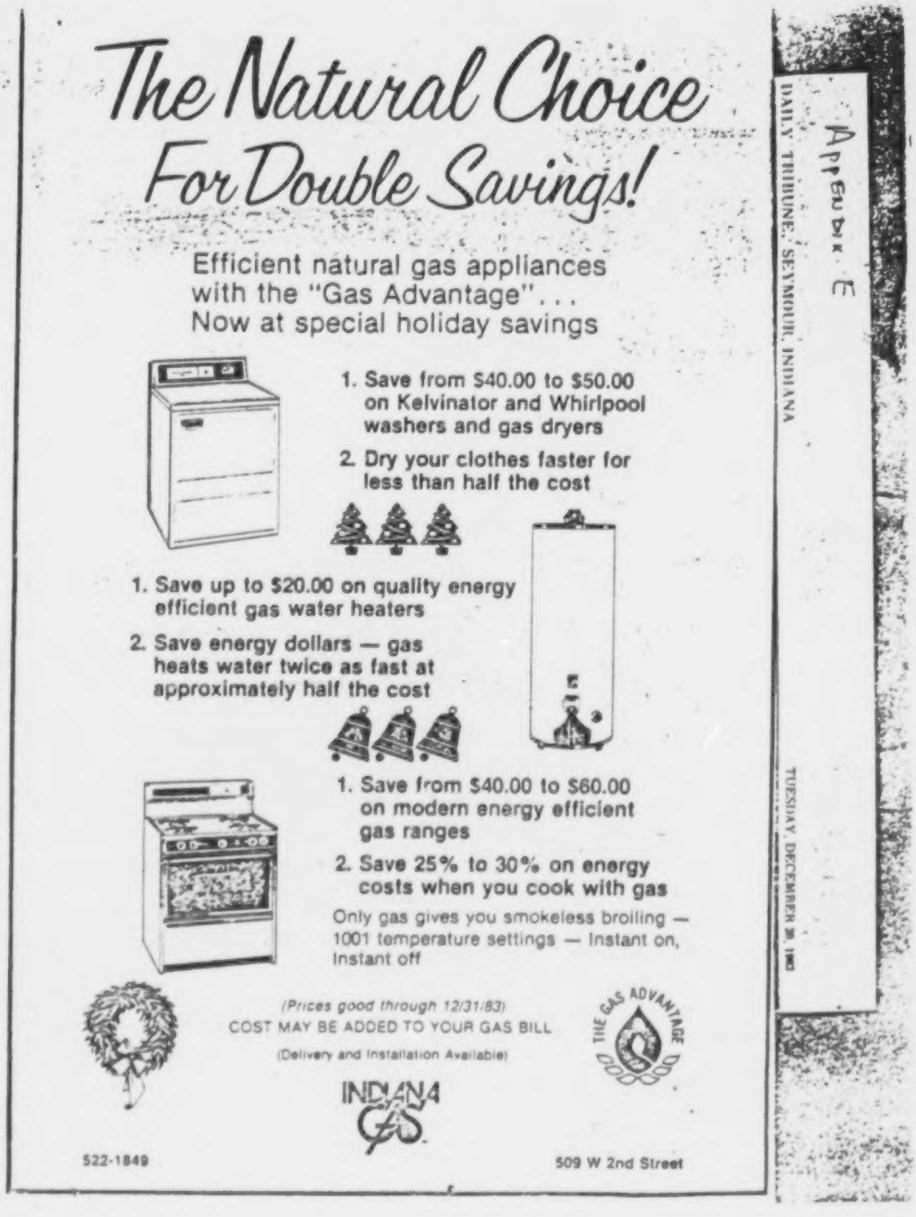
(Delivery and Installation Available)

INDIANA GAS
522-1849
509 W. 2nd Street

Appendix E

DAILY TRIBUNE, SEYMOUR, INDIANA

TUESDAY, DECEMBER 20, 1983



The Natural Choice For Double Savings!

Efficient natural gas appliances
with the "Gas Advantage"...
Now at special holiday savings

1. Save from $40.00 to $50.00 on Kelvinator and Whirlpool washers and gas dryers
2. Dry your clothes faster for less than half the cost

1. Save up to $20.00 on quality energy efficient gas water heaters
2. Save energy dollars — gas heats water twice as fast at approximately half the cost

1. Save from $40.00 to $60.00 on modern energy efficient gas ranges
2. Save 25% to 30% on energy costs when you cook with gas

Only gas gives you smokeless broiling — 1001 temperature settings — Instant on, Instant off

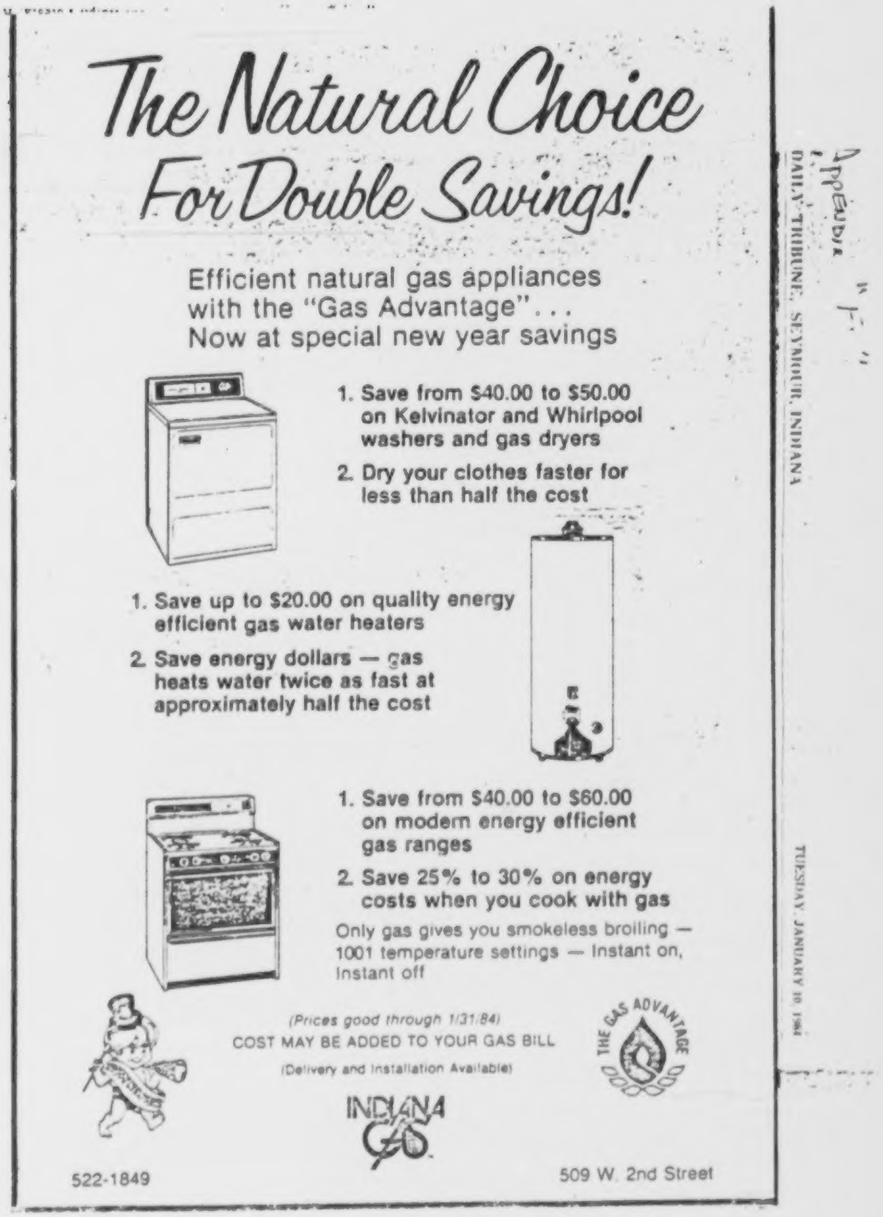
(Prices good through 12/31/83)
COST MAY BE ADDED TO YOUR GAS BILL
(Delivery and Installation Available)

THE GAS ADVANTAGE

INDIANA GAS

522-1849

509 W 2nd Street



DAILY TRIBUNE, SEYMOUR, INDIANA

TUESDAY, JANUARY 10, 1984

Appendix "F"

The Natural Choice For Double Savings!

Efficient natural gas appliances
with the "Gas Advantage"...
Now at special new year savings

1. **Save from $40.00 to $50.00 on Kelvinator and Whirlpool washers and gas dryers**
2. **Dry your clothes faster for less than half the cost**

1. **Save up to $20.00 on quality energy efficient gas water heaters**
2. **Save energy dollars — gas heats water twice as fast at approximately half the cost**

1. **Save from $40.00 to $60.00 on modern energy efficient gas ranges**
2. **Save 25% to 30% on energy costs when you cook with gas**

Only gas gives you smokeless broiling — 1001 temperature settings — Instant on, Instant off

(Prices good through 1/31/84)
COST MAY BE ADDED TO YOUR GAS BILL
(Delivery and Installation Available)

THE GAS ADVANTAGE

INDIANA GAS

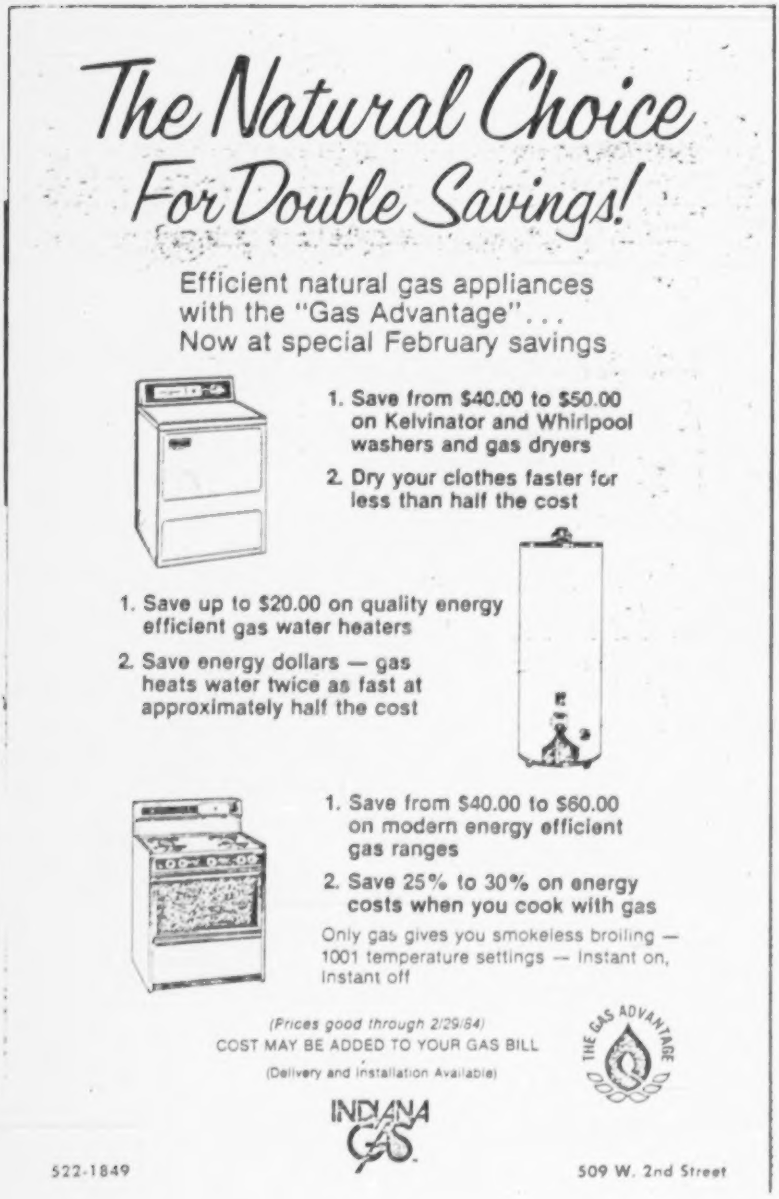
522-1849

509 W. 2nd Street

Appendix "G"

SEYMOUR DAILY TRIBUNE, SEYMOUR

TUESDAY, FEBRUARY 7, 1984



The Natural Choice For Double Savings!

Efficient natural gas appliances
with the "Gas Advantage"...
Now at special February savings

1. Save from $40.00 to $50.00 on Kelvinator and Whirlpool washers and gas dryers
2. Dry your clothes faster for less than half the cost

1. Save up to $20.00 on quality energy efficient gas water heaters
2. Save energy dollars — gas heats water twice as fast at approximately half the cost

1. Save from $40.00 to $60.00 on modern energy efficient gas ranges
2. Save 25% to 30% on energy costs when you cook with gas

Only gas gives you smokeless broiling — 1001 temperature settings — instant on, instant off

(Prices good through 2/29/84)

COST MAY BE ADDED TO YOUR GAS BILL

(Delivery and Installation Available)

THE GAS ADVANTAGE

INDIANA GAS

522-1849

509 W. 2nd Street

night, a 2,032.

Pam McKinney leads the all events scratch (1,560) and handicap (1,881) lists.

Tournament director Anne Baxter said no tournament bowling is scheduled today, but eight teams and 15 sets of doubles will bowl Wednesday morning, beginning at 9:30 o'clock.

ner Beverly LaGrun, Terisa Schwartz, Judy Gamorel, Judy Smith-Sue Hildreth, Roberta Stringer-Marianne Beck, June Lucas-Mable Quinn, Carolyn Krueger-Pat [illegible], Virginia Greene-Phyllis Cassidy.

Tournament Leaders

Singles: Kathy Allen 642.

Doubles: Pam McKinney-Wanda Thompson 1,247.

Team: Scarrs Cleaners 3,0[illegible], Bev's Team 3,0[illegible], ITT 3,0[illegible], Vic's Liquors 2,9[illegible], Mary's Team 2,973.

All events: scratch: Pam McKinney 1,560; handicap: Pam McKinney 1,881, Margie Thompson 1,811, Judy Davis 1,8[illegible], Cindy LaMarr 1,7[illegible], Sonja Ulrey 1,747.

Seymour Regional a week ago, had 57 points.

Jennings County placed ninth with 33 points, and Rushville, second to Floyd Central in the regional, was 10th with 29½ points.

Team points (top 10): Evansville Mater Dei 67½, Indianapolis Roncalli [illegible], Floyd Central 57, Mooresville 48, Decatur Central 40½, Perry Meridian [illegible], Bloomington North 37, Ben Davis 34, Jennings County 33, Rushville 29½.

DAILY TRIBUNE, SEYMOUR, INDIANA

TUESDAY, FEBRUARY 14, 1984

Appendix "H"

The Natural Choice...

Natural Gas Water Heaters!

Gas heats water twice as fast for approximately half the cost — saving time and energy.

SALE

A.O. SMITH
and
RUUD

Water Heaters

THE GAS ADVANTAGE

30 gallon
Ruud RP-30
or
A.O. Smith KGA-30
Sale $179.50

40 gallon
Ruud RP-40
or
A.O. Smith KGA-40
Sale $189.50

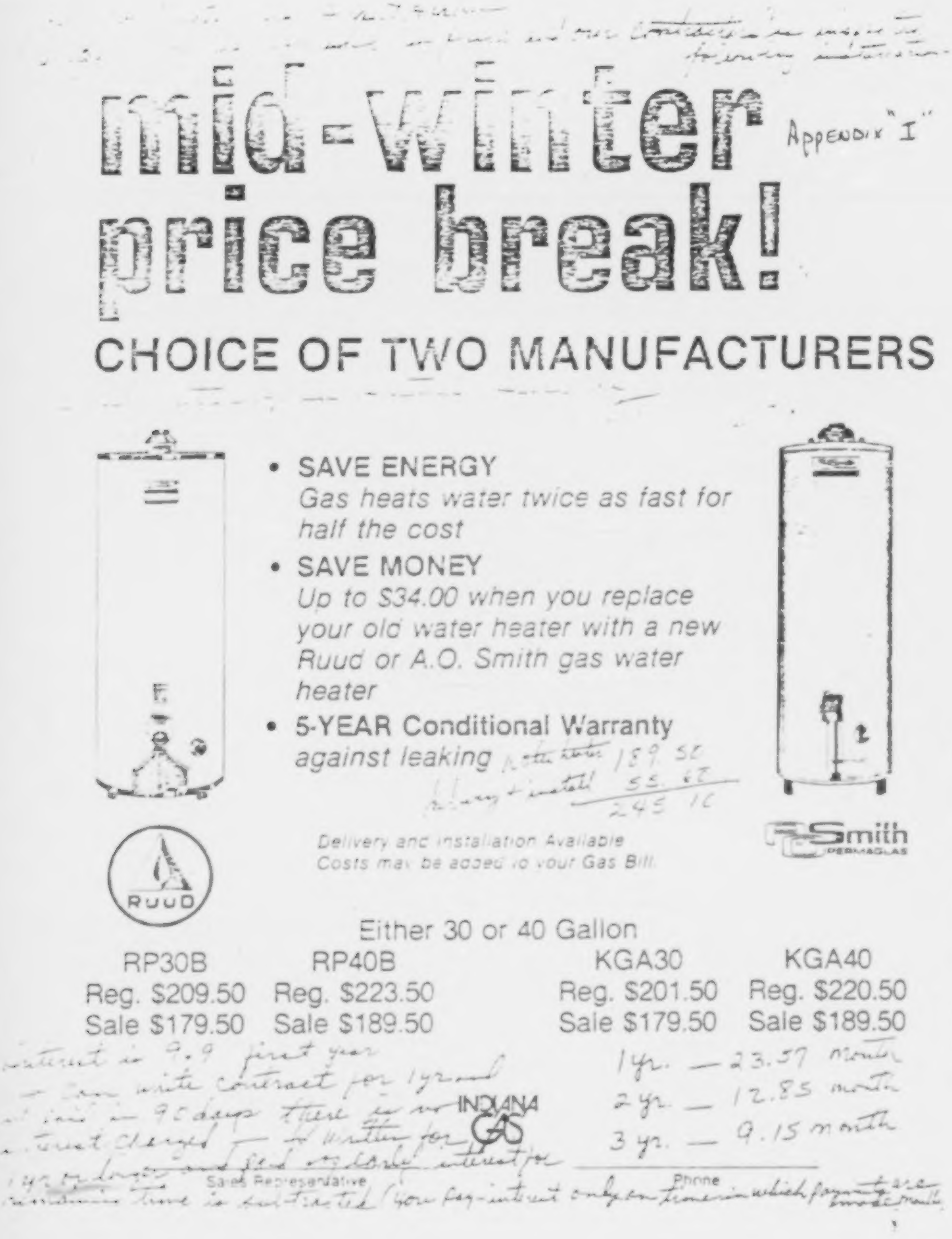
(Prices good through 3/31/84)
COST MAY BE ADDED TO YOUR GAS BILL

(Delivery and Installation Available)

INDIANA GAS

522-1849

509 W. 2nd Street



[illegible] and our Contracts [illegible] to inquire [illegible] financing information

Appendix "I"

mid-winter price break!

CHOICE OF TWO MANUFACTURERS

- SAVE ENERGY
  Gas heats water twice as fast for half the cost
- SAVE MONEY
  Up to $34.00 when you replace your old water heater with a new Ruud or A.O. Smith gas water heater
- 5-YEAR Conditional Warranty
  against leaking

Water heater 189.50
Delivery + install 55.60
245.10

Delivery and installation Available
Costs may be added to your Gas Bill.

RUUD

Smith PERMAGLAS

Either 30 or 40 Gallon

RP30B	RP40B	KGA30	KGA40
Reg. $209.50	Reg. $223.50	Reg. $201.50	Reg. $220.50
Sale $179.50	Sale $189.50	Sale $179.50	Sale $189.50

1 yr. — 23.57 month
2 yr. — 12.85 month
3 yr. — 9.15 month

interest is 9.9 first year — can write contract for 1 yr and if paid in 90 days there is no interest charged — if written for 1 yr or longer and paid off early interest for remaining time is subtracted (you pay interest only on time in which payments are made monthly)

INDIANA GAS

Sales Representative

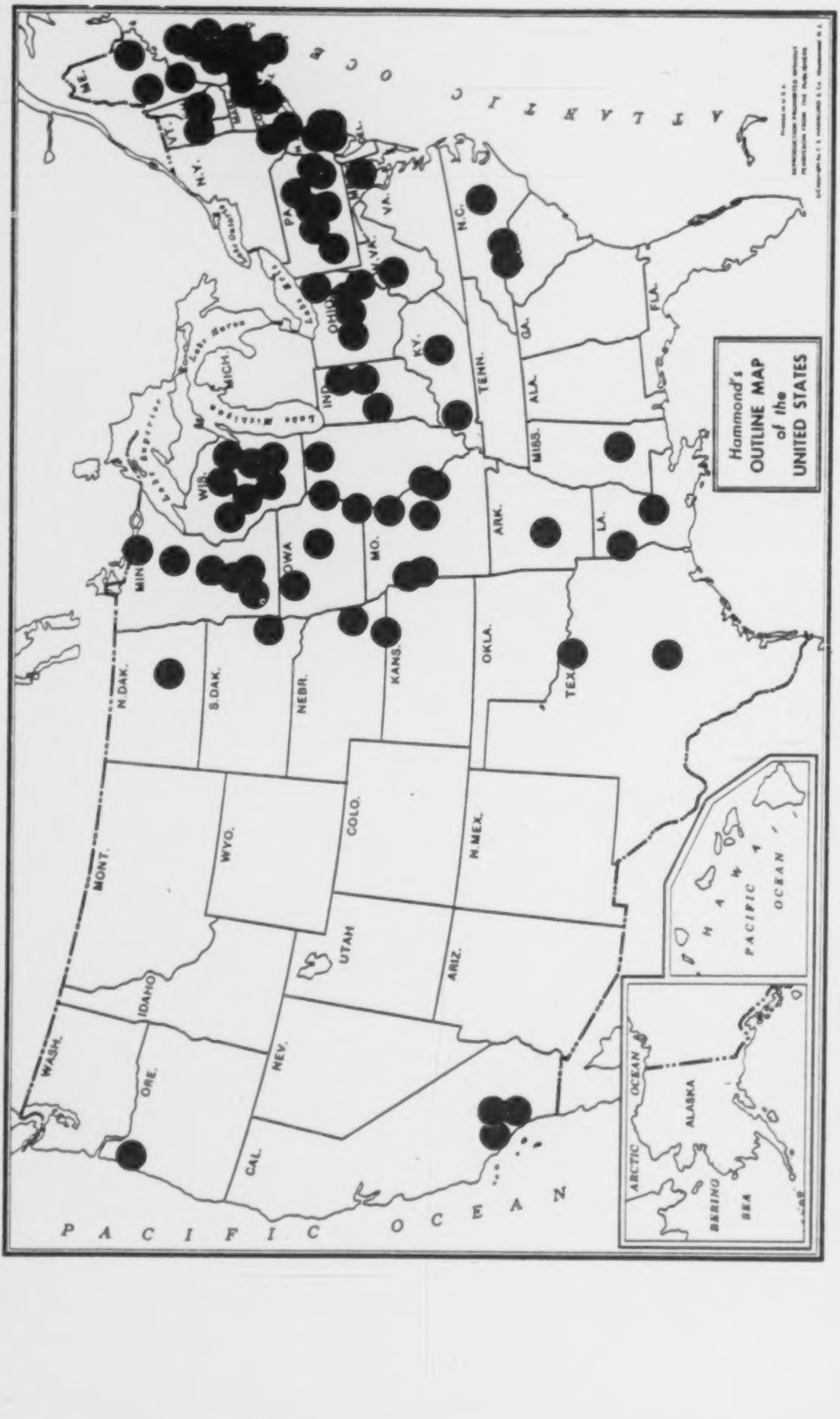
Phone

Appendix "J"

INDIANA GAS

THERESA GABAREE
Sales Representative

INDIANA GAS COMPANY, INC.
509 W. 2nd Street
Seymour, IN 47274
Bus. 812-522-1849
Res. 812-346-1564


Hammond's
OUTLINE MAP
of the
UNITED STATES
ATLANTIC OCEAN
PACIFIC OCEAN
ME.
VT.
N.Y.
PA.
DEL.
VA.
W.VA.
N.C.
OHIO
IND.
KY.
TENN.
GA.
FLA.
ALA.
MISS.
LA.
ARK.
MO.
MICH.
WIS.
MINN.
IOWA
N.DAK.
S.DAK.
NEBR.
KANS.
OKLA.
TEX.
MONT.
WYO.
COLO.
N.MEX.
IDAHO
UTAH
ARIZ.
WASH.
ORE.
NEV.
CAL.
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
Lake Ontario
ALASKA
ARCTIC OCEAN
BERING SEA
HAWAII
PACIFIC OCEAN

GAS AND ELECTRIC UTILITIES IN DIRECT COMPETITION WITH SUPPLIERS *

Arkansas
Arkansas - Louisiana Gas

California
Southern California Gas Company
Edison Company
Department of Water and Power

Connecticut
Connecticut Light & Power

Illinois
Northern Illinois Gas
Iowa - Illinois Gas & Electric
Wisconsin Power & Light Company

Indiana
Indiana Gas
Northern Indiana Public Service Co. (NIPSCO)
Indiana Power & Light (IP&L)

Iowa
Iowa Electric Light & Power Company
Northern Natural Gas
Keokuk Gas Company
Iowa - Illinois Gas & Electric
Great River Gas Company

Kentucky
West Kentucky Gas
CIPS

Kansas
Kansas - Nebraska Natural Gas Company
Kansas Gas & Electric
Kansas Power & Light

Louisiana
Entex Gas
Arkansas - Louisiana Gas

Maine
Maine Public Service Company
Bangor Hydro Electric
Northern Utilities

Maryland
Baltimore Gas & Electric

* Identified by ASA Survey of its members

(continued)

GAS AND ELECTRIC UTILITIES IN DIRECT COMPETITION WITH SUPPLIERS *

Massachusetts
Commonwealth Gas
Massachusetts Electric
Cape Cod Gas
Commonwealth Electric
Berkshire Gas Company
Bay State Gas Company
Boston Gas Company
Lowell Gas Company
Fall River Gas Company
Valley Gas Company
Eastern Edison Electric

Minnesota
Minnegasco
Minnesota Natural Gas
Minnesota Power & Light
Peoples Gas
North Central Public Utility
Ruenstone Electric

Missouri
LaClede Gas
Union Electric
Great River Gas Company
Kansas Power & Light
Missouri Public Service Company
Kansas Gas & Electric

Nebraska
People's Natural Gas Co.
Kansas - Nebraska Gas Co.

New Hampshire
Concord Natural Gas

New Jersey
Public Service Electric & Gas
Elizabethtown Gas Company
New Jersey Natural Gas Co.
P.S.E. & G

New York
Brooklyn Union
Consolidated Edison

North Carolina
Public Service Co. of North Carolina
Piedmont Natural Gas
Duke Power Company

* Identified by ASA Survey of its members

(continued)

GAS AND ELECTRIC UTILITIES IN DIRECT COMPETITION WITH SUPPLIERS *

North Dakota
Montana Dakota Utilities

Ohio
East Ohio Gas Company
Columbia Gas Company
Ohio Edison
Ohio Gas Company
Buckeye Rural Electric Company

Oregon
Northwest Natural Gas Company

Pennsylvania
U.G.I.
National Fuel Distribution Corp.
People's Natural Gas Company
Philadelphia Gas Works
Philadelphia Electric Company
Pennsylvania Fuels
Pennsylvania Gas & Water

South Carolina
Piedmont Natural Gas
Duke Power

South Dakota
Minnegasco

Texas
Lone Star Gas Company

Vermont
Central Vermont Public Service

West Virginia
Buckeye Rural Electric

Wisconsin
Wisconsin Gas
Wisconsin Electric
Wisconsin Natural Gas
Wisconsin Fuel & Light
Wisconsin Public Service Co.
WICOR
Wisconsin Power & Light
Madison Gas & Electric

* Identified by ASA Survey of its members

Senator NICKLES. Thank you very much, Mr. Norton.
Mr. Reckinger.

STATEMENT OF WALTER M. RECKINGER III, SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, INC.

Mr. RECKINGER. Mr. Chairman, members of the committee, my name is Walter Reckinger III. I am vice president and general manager of a small family-owned heating and cooling company, Reckinger Heating and Cooling, in Dearborn, MI.

I am a member of the Sheet Metal and Air Conditioning Contractors National Association [SMACNA], and I am a current member of SMACNA's government affairs and SMAC-PAC committees. SMACNA now represents 5,200 construction contracting companies throughout the Nation, many in Michigan. While SMACNA consists of both large and small companies, a majority of our members are small businesses with a grave concern for the issue at hand, unfair and anticompetitive utility practices.

As a small businessman and as chairman of the Detroit SMACNA legislative committee, I am especially sensitive to the outcry of small business enterprises when regulated monopolies threaten their survival. That is why I'm here today, to address the threat to private sector small business by a nonprivate sector entity, the unregulated monopoly.

While Federal incentives for energy conservation are important to reducing energy in our homes, factories, and businesses, we believe that the private sector, not utilities, should lead the way. Utilities should stay in the business of selling power and not misuse their advantage of monopoly protections to take portions of the private energy supply and installation markets from small businesses.

In Michigan we are experiencing unfair competition from utilities which I feel is a direct reaction to the CACS Program. An even greater threat is taking place right now as our State is moving ahead with the CACS Program. Small businesses have been harmed as a result of the RCS Program because proper steps were not taken to see that small businesses would be protected from unfair competition.

Our family business, as an example, is among those companies which have been driven out of the business of conducting energy audits for our residential customers. We thought we were quite competitive and had a chance to make a profit if we sold these audits at $35 each.

We were, however, shocked when the State of Michigan had the utilities begin to offer similar audits under the Federal plan at $10 each, an obviously subsidized rate. When we cried foul, the utilities said they were ordered to do this by the State and Federal Governments. The basic claim was that the utilities don't really want to do this, it is a big pain, et cetera, but the law mandated that they must.

Now we're faced with the same type of situation with the CACS Program. This program differs only slightly from the RCS Program in Michigan as they intend to run it. The most significant difference is that some attempt to charge at or near actual cost of the program will be made. However, my competitors, the utilities, will receive free advertising, piggyback mailing with utility bills, immediate name recognition, and all the other advantages of competing against the small businessman on a subsidized basis.

Only a few weeks ago in a conversation with a utility representative he vied for my sympathy by claiming that they were forced to get into this program against their will by the Federal Government. However, these victims of the Federal Government's dictates—that is, the utilities—were very busy lobbying to keep these programs alive when small businesses attempted to have this subsidized and unfair competition repealed.

The CACS Program is also competing unfairly against programs which are receiving Federal and State funding to retrain unemployed workers to become energy management auditors and technicians. In Michigan we are in the process of training unemployed sheet metal workers under such a program. These workers are to be used to conduct energy audits on commercial and apartment buildings.

SMACNA is associated with the National Energy Management Institute, NEMI, a labor-management venture of the Sheet Metal Workers International Association and the Sheet Metal & Air Conditioning Contractors National Association and their jointly supported national training fund. I am not so sure the industry and Government money spent on this program will ever be given a chance to work.

Just weeks before we graduated our first energy management technicians under this program in Michigan, the public utility commission, in what they believe is compliance with Federal law, ordered most Michigan utilities to begin performing subsidized energy audits on commercial and apartment buildings. What I think hurts most is that our employers and employees who will be most damaged by this program are being forced to subsidize the program through inflated utility rates.

The subsidies and consequent profits enjoyed by utilities through these unfair subsidized activities have, in my opinion, encouraged some to become even bolder in their disregard for small business. Utilities are also aware of the disinterest the FTC has shown in this matter, and I believe that they will take full advantage of it.

One glaring example is the home heating service program in place in Michigan, with a utility called Michigan Consolidated Gas Co., MichCon. MichCon claims that their $39 flat fee for furnace repairs hasn't cost the ratepayer any money and that it is an unsubsidized program. They would have everyone believe that there is no comingling of funds or unfair competition with small business.

However, under Case No. U-7895 before the Michigan Public Service Commission, MichCon requested $1.1 million for costs associated with the program, and I expect, based on PSC staff recommendations and the administrative law judge's opinion in the case, that the commission will allow just under $1 million in subsidies for this program.

I use that as an example so that you can see that while the public service commissions feel that they are doing an adequate job of protecting small business from anticompetitive situations, even in one such as this, which is a more glaring example, the sympathy lies with allowing those kind of extraordinary costs to be absorbed by the ratepayer.

This and other horror stories have prompted us in Michigan to form the Michigan Coalition Against Unfair Utility Practices. The coalition consists of individuals, businesses, associations, and organized as well as open shop labor. It is rare that such a diversified group can be so united in a cause. We all realize that our only chance to survive in our business and livelihoods is to fight to keep utilities in the business they belong in, energy distribution.

I thank you for your time.

[The prepared statement of Mr. Reckinger follows:]

The Sheet Metal and Air Conditioning Contractors' National Association, Inc.

SMACNA

STATEMENT OF WALTER M. RECKINGER, III

TO

U.S. SENATE SUBCOMMITTEE ON REGULATION

ON

UTILITY COMPETITION WITH SMALL BUSINESS

MAY 6, 1985

SMACNA is a National Trade Association representing some 2500 sheet metal contractors engaged in the fields of heating, air conditioning, air pollution control, solar energy installation, architectural sheet metal and other metal applications. The sheet metal contracting industry totals over $8.6 billion annually.

National Headquarters
8224 Old Courthouse Road
Tysons Corner, Vienna, Virginia 22180
(703) 790-9890

Capitol Hill Office
418 South Capitol Street, S.E.
Washington, D.C. 20003
(202) 547-8202

Mr. Chairman, Members of the Committee, my name is Walter M. Reckinger, III. I am Vice President and General Manager of a small family-owned heating and cooling company, Reckinger Heating and Cooling, in Dearborn, Michigan. I am a member of the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) and am a current member of SMACNA's Governmental Affairs and SMAC-PAC Committees. SMACNA represents 2,500 construction contracting companies throughout the nation, many in Michigan. While SMACNA consists of both large and small companies, a majority of our members are small businesses with a grave concern for the issue at hand--unfair and anti-competitive utility practices. As a small businessman, and as Chairman of the Detroit SMACNA legislative committee, I am especially sensitive to the outcry of small business enterprises when regulated monopolies threaten their survival. That is why I am here to today--to address the threat to private sector small businesses by a nonprivate-sector entity, the unregulated monopoly.

What's unfair about utility competition? Why is competition from utilities any different than competition from other businesses?

First, small businesses support fair and open competition. However, a utility company is given protected status. The utility is granted monopoly status (free from competition) and is guaranteed the opportunity for a rate of return. In exchange for this protected status, it is regulated by the state regulatory commission.

Usually a large business, a utility's size and resources far outstrip many small businesses in the community. When this protected entity is permitted to compete in other unregulated markets, there are critical market advantages which it enjoys which are unmatched by small businesses.

It is generally recognized that participation in unregulated markets by regulated entities, such as utilities, raise competition concern, particularly with respect to the problem of cross-subsidies between regulated and unregulated ventures. Utility supply and installation programs marketed under the guise of energy conservation serve the same ends--to unfairly compete with private sector small businesses through cross-subsidiza tion in many forms. The Residential Conservation Service (RCS) and the Commercial and Apartment Conservation Service (CACS) are perfect examples of utilities using federal legislation as an excuse to cover their natural interest in taking private sector markets from energy conservation related small businesses.

The U.S. Small Business Administration has reported that utility supply and installation programs cannot be effectively regulated to eliminate improper subsidies and other competition problems. Such unregulated activity by the utility does not provide significant public benefits which outweigh the hazard to competition and the cost of regulatory oversight. Therefore, their March 1984 report, (which I have provided for the Committee) recommended that utilities not be permitted to engage in this activity.

SMACNA and over 4.5 million other small businesses have formed the coalition represented here today (Alliance For Fair Competition) to express our concerns about utility supply and installation programs. These concerns go far beyond improper subsidies by utilities. A utility supply and installation program disrupts competitive markets by its selection of particular products, suppliers or installers, by unfairly promoting its own fuel, or by setting product or service prices. The Alliance was formed because of the special allowances given utilities throughout the country which are threatening the existence of retailers, contractors, wholesalers, manufacturers, oil jobbers, and consulting engineers. We feel strongly that direct competition from utilities is anticompetitive and most often unfairly subsidized by the ratepayers putting private business at a great disadvantage.

SMACNA takes pride in its significant achievements in the area of energy conservation. Our Board of Directors has consistently placed energy efficiency as a top policy priority to be pursued in Congress and throughout the government agency level. Small firms in the private sector can best diagnose and solve the nation's energy problems. By giving public utilities the unfair advantage of pricing, selection, and installation of energy efficient equipment, the program fails to attain its goals. As the Small Business Administration report concludes, regulated utilities should not be allowed to compete in unregulated markets. We strongly agree with the SBA report statement that utility supply and installation programs pose severe anticompetitive problems and are generally unnecessary. Most importantly, these programs are unfairly subsidized with ratepayer funds and disrupt competitive markets through the selection of particular products, or prices. Utility competition to small businesses must be eliminated to the greatest extent possible.

For the above reasons, the SBA concluded that supply and installation programs pose significant competition problems. Further, they have not found any significant benefits from such programs that cannot be provided by unregulated private firms. At a minimum, SMACNA has recommended to Congress that legislation be passed requiring that each such program be reviewed at a public hearing at the state level to assure full public input into the program formulation process and that competition concerns be addressed. Such a public forum will benefit all such utility programs by assuring that:

(1) the program most effectively addresses its energy goals;

(2) the program does not adversely affect competition; and

(3) alternative programs can be considered.

While federal incentives for energy conservation are important to reducing energy inefficiency in our homes, factories, and businesses, we believe that the private sector not utilities, should lead the way. Utilities should stay in the business of selling power and not misuse their advantage of monopoly protections to take portions of the private energy supply and installation markets from small business.

In Michigan, we are experiencing unfair competition from utilities which I feel is a direct reaction to the RCS program. An even greater threat is taking place right now as our state is moving ahead with the CACS program.

Small businesses have been harmed as a result of the RCS program because proper steps were not taken to see that small businesses would be protected from unfair competition. Our family business, as an example, is among those companies which have been driven out of the business of selling energy audits to our residential customers. We invested in portable computer terminals for link-up with an outside source main frame computer. We would transmit data on a customer's home via the telephone lines and would receive a computer print-out of recommended energy conservation measures. Our cost at that time was about $7 to $10 per print-out for the "time share" charges for use of the main frame computer link-up.

We also had the time of our employees to consider. We thought we were quite competitive and had a chance to make a profit if we sold these audits at $35.00 each. We were shocked, however, when the state of Michigan had the utilities begin to offer similar audits at $10.00, an obviously subsidized rate required by federal law. When we cried foul, the utilities said they were ordered to do this by the state and federal governments. The basic claim was that the utilities didn't really want to do this; it was a big pain, etc., but the law mandated that they must.

We then thought that perhaps some good could be derived from this bad situation. After all, the utilities promised that they would be referring many customers who would want to purchase energy retrofit systems from us, as a qualified contractor. So, we signed up to be on "the list." It's a good thing I didn't hold my breath in anticipation of the surge of business this was going to generate. It never came. In fact, the estimates of retrofits being handed out by the utility auditors were so inaccurate, that hardly anyone could afford to waste time responding to a customer's request for a bid on the utility recommended retrofits. In fact, in some cases, the utility was publicizing an installed cost for a system that was actually less than the wholesale cost to the dealer for the materials alone. It took an incredible amount of time, redtape-cutting and pressure from higher-up in the state to get this blunder corrected. There are still figures which I feel do not represent accurate costs for conservation measures.

I requested a copy of the figures from the state which the utility auditors give to audit customers. The response I received was that this information was confidential and was solely for the use of the utility. I asked why, if this was a public program, couldn't the information be made available to contractors since it was available to the public. The state employee said it was a requirement of the program by the federal government. To this day, I don't know if his statement is true or not.

I decided to have an energy audit on my own home to see what kind of program this was. The young man who came to my home was enthusiastic, charming, and had what appeared to be a great desire to provide an accurate audit. However, he was not qualified to conduct an accurate audit and several glaring errors support my opinion. For example, he recommended a thermal vent damper be installed on my furnace. Unfortunately, my furance was a brand new high efficiency furnace, vented through the wall and not through the chimney. Not only would the damper not have worked, it would have rendered my furnace inoperative because of special safety sensors. He also recommended that I install a clock thermostat on my system which already had a multiple set-up set-back capacity installed. His inexperience kept him from recognizing it.

There are many other examples of similar blunders under the RCS program.

Now we are faced with this same type of situation with the CACS program. This program differs only slightly from the RCS program in Michigan, as they intend to run it. The most significant difference is that some attempt to charge at or near the actual cost of the program will be made.

However, my competitors, the utilities, will receive "free advertising", piggy back mailing with utility bills, immediate name recognition, and all the other advantages of "competing" against the small businessman on a subsidized basis. And yes, only a few weeks ago, a utility representative vied for my sympathy by claiming they were forced to get into this program against their will by the federal government. However, these "victims" of the federal government's dictates, that is the utilities, were very busy lobbying to keep these programs alive when small businesses attempted to have this subsidized and unfair competition repealed. I know that no one back in Michigan is naive enough to believe that the utilities lobbied so hard because they disliked the unfair advantage they enjoyed along with a guaranteed profit.

The CACS program is also competing unfairly against programs which are receiving federal and state funding to retrain unemployed workers to become energy management auditors and technicians. In Michigan, we are in the process of training unemployed sheet metal workers under such a program. These workers would have been used to conduct energy audits on commericial and apartment buildings. SMACNA is associated with the National Energy Management Institute (NEMI). NEMI is a labor-management venture of the Sheet Metal Workers' International Association (SMWIA) and the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) and their jointly supported National Training Fund (NTF).

However, I am not so sure that the industry and government monies spent on this program will ever be given a chance to work. Just weeks before we graduate our first energy management technicians in Michigan, the public utility commission, in what they believe is compliance with federal law, ordered most Michigan utilities to begin performing subsidized energy audits on commericial and apartment buildings. What I think hurts the most is that our employers and employees who will be most damaged by this program are being forced to subsidize the program through inflated utility rates.

The subsidies and consequent profits enjoyed by utilities through these unfair subsidized activities have, in my opinion, encouraged some to become even bolder in their disregard for small business. Utilities are also aware of the disinterest the F.T.C. has shown in this matter, and I believe they will take full advantage of it.

One glaring example is the Home Heating Service Program in place in Michigan, with a utility called Michigan Consolidated Gas Company (Mich-Con). Mich-Con claims that their $39.00 flat fee for furnace repairs hasn't cost the ratepayers any money and that it is an unsubsidized program. They would have everyone believe that there is no co-mingling of funds or unfair competition with small business. However, under Case #U-7895 before the Michigan Public Service Commission, Mich-Con requested $1.1 million for costs associated with the program and I expect based on PSC staff recommendations and the administrative law judges' opinion in the case, that the commission will allow just under $1 million in subsidies for this program. Imagine how it feels to sit down and pay my gas bill each month and know that a portion of what I send in is helping a utility to not only go into competition with me but I'm also subsidizing programs with which I can't possibly compete.

This and other horror stories have prompted us in Michigan to form the Michigan Coalition Against Unfair Utility Practices. The coalition consists of individuals, buisnesses, associations and organized as well as open shop labor. It is rare that such a diversified group can be so united in a cause. We all realize that our only chance to survive in our businesses and livelihoods is to fight to keep utilities in the business they belong in, energy distribution.

CONCLUSION

As my remarks here have demonstrated, there has been substantial growth and sensitivity by the small business community to market disruption caused by utilities who are mandated to conduct conservation activities. Part of that realization has come about as a result of identifying significant intrusions by utilities into traditional small business markets.

Thus, the Sheet Metal and Air Conditioning Contractors' National Association, in cooperation with the Alliance for Fair Competition, advocates its recommendations that audits should be contracted out; that utilities should not be permitted provide supply and installation programs, to advertise or market their services with the audit or audit announcements; that the utilities' marketing department should not have access to audit results; and that utilities should provide conflict of interest notices.

Public notice and opportunity for comment should be provided by the state on plans submitted by utilities to implement CACS type programs. This is especially necessary if the utility requests exemptions.

Finally, we suggest that the U.S. Congress recognize the dangerous economic impact on a significant number of small businesses created by well-intentioned energy conservation plans such as CACS and add restrictions to current law to restrain utilities from anticompetitive behavior in the name of conservation. A serious regulatory analysis should be conducted in an effort to examine and minimize adverse economic impact on small business before utilities are allowed into private sector markets. Allowing small businesses a fair chance to compete will benefit the nation's economy and its energy goals. Thank you for your interest in this important issue and for the opportunity to recommend improvements to energy conservation programs on behalf of millions of small businesses in Michigan and throughout the nation.

Senator NICKLES. Thank you very much for your statement. Mr. Farruggia.

STATEMENT OF SAL FARRUGGIA, LEGISLATIVE CHAIRMAN, NATIONAL ASSOCIATION OF PLUMBING-HEATING-COOLING CONTRACTORS, AS PRESENTED BY CHUCK LAVIN

Mr. LAVIN. I am representing Mr. Farruggia. I am Chuck Lavin. I am executive vice president for the National Association of Plumbing-Heating-Cooling Contractors.

It amazes me to hear all these abbreviations that you guys hear. You must have a book back there to look them up or else you keep shaking your heads.

I am happy to be here, and I'm just here real shortly to tell you it just ain't fair. Our members, who are about 6,500 members across the country, plumbing, heating and cooling contractors, are in a business that is becoming less and less profitable. Here it is, on the one hand, competition coming in with equipment that is costing less than our cost. They are maintaining it free. They are putting it in free. And then, on the other hand, they are guaranteed a profit because the rates are increased every year through their monopoly rights and actually it's paid by the ratepayers.

I just don't feel this is fair and our members are losing more and more work across the country, especially the smaller contractors. It's pretty hard to separate the Commercial and Apartment Conservation Act and the Residential Conservation Service, so I have to talk on just about both of those. But I feel that if the CACS is going to be continued there are certain things that have to be done to protect our industry and the small businesses across the country.

I think first of all you're going to have to require that the utilities contract out the audits. They should be prohibited from advertising with either the audit announcements or the audits. I think they should be prohibited from providing audit results to their— they should be prohibited from providing audit results to their marketing department or using other market advantages where they have a conflict of interest.

They should not be allowed to promote fuel switching, if you're electrical going to the gas, or gas to electric, and they should be prohibited from supply, installation, and service.

There's been substantial growth and sensitivity by the small business community to market disruption caused by utilities who are mandated to conduct conservation activities. Part of that realization has come about as a result of identifying significant intrusions by utilities into traditionally small business markets, as has been announced.

These programs have already been put in place by many States and utilities. If the Congress and Senate repeals either or both, that action does not eliminate the programs but only the Federal mandate. And injury to the competitive free marketplace is already under way and in place. It may be enhanced by removal of Federal restrictions against unfair or anticompetitive activity which the States must lack authority to control.

If Congress decides to repeal the program, transition provisions should be provided in the legislation to provide States with the authority to control unfair or anticompetitive acts or marketing practices.

Thank you for the opportunity to speak and again it just ain't fair to our industry the way it worked out.

[The prepared statement of Mr. Farruggia follows:]

PHCC

National Association of Plumbing-Heating-Cooling Contractors

Pride In Our Past—Faith In Our Future

Statement to the

Energy Regulation and Conservation Subcommittee
Committee on Energy and Natural Resources
United States Senate

on

S. 410 - Repeal of the Commercial and Apartment Conservation Service

By Sal Farruggia, President
Garnet Plumbing Company, Perrineville, New Jersey
NAPHCC Legislative Chairman

on behalf of the

National Association of Plumbing-Heating-Cooling Contractors

May 6, 1985

180 S. Washington St., P.O. Box 6808, Falls Church, VA. 22046 • 703/237-8100

Mr. Chairman,

Thank you for the opportunity to testify on S. 410 to repeal the Commerical and Apartment Conservation Service (CACS). Some of my comments will also extend to the sister program, the Residential Conservation Service (RCS).

I am here today representing the National Association of Plumbing-Heating-Cooling Contractors (NAPHCC). Accompanying me is the NAPHCC Executive Director Charles Lavin and Director of Government Affairs Dennis Lavallee.

The National Association of Plumbing-Heating-Cooling Contractors is the oldest national association in the construction industry and the largest in the plumbing-heating-cooling industry. It has approximately 6500 members. Membership comes from every state in the country and is organized through about 300 state and local affiliated associations. This industry employs 400,000 people and has receipts of 21 billion dollars.

We are here today as strong advocates of energy conservation and as strong opponents of unfair utility competition. Federally mandated utility services for energy conservation in our traditional market place is what the CACS program gives us.

Furthermore, these CACS programs have already been approved for more than a dozen states and are being implemented by utilities. To immediately repeal CACS would not necessarily terminate these state and utility programs. Many of these would continue.

Thus, if the Congress does repeal CACS, you should incorporate some transition provisions for programs that were created under the CACS legislative mandate or influenced by this direction toward attention to energy conservation.

Transition provisions should require that the utility be granted prior approval for any new energy conservation programs and that approval for existing programs should be subject to review at the next rate proceeding or within one year. This would apply to commercial energy conservation business which is defined as audit, service, supply or installation programs.

Approval of new programs or renewal of existing programs should be subject to notice and an opportunity for a public hearing at which potentially unfair or anticompetitive features of a utility program could be addressed.

WHAT'S UNFAIR ABOUT UTILITY COMPETITION?

So, why is competition from utilities any different than competition from other businesses?

Small businesses suppport fair and open competition. However, a utility company is given protected status. The utility is granted monopoly status (free from competition) and is guaranteed the opportunity for a rate of return. In exchange for this protected status, it is regulated by the state regulatory commission.

Usually a large business, its size and resources far outstrip many small businesses in the community. When this protected entity is permitted to compete in other markets, there are market advantages which it enjoys which are unmatched by most others, particularly small businesses.

Picture for a moment a fortress surrounded by fields. Men are competing on the field in hand to hand combat. Symbolizing small businesses, they are limited in resources. The fortress symbolizes the state regulatory commission which provides a protective enclosure for the garrison within. Here the utility can amass its resources and use them -- food, fresh horses, weapons.

Then, troops are sent forth to join the field combat. Clearly, they have a competitive advantage that can critically injure, if not destroy, the combatants already there.

What's the nature of the resources that provide a utility with that market advantage?

1. Cross-subsidization -- While generally state regulatory commissions prohibit a utility from using its regulated activities to subsidize its unregulated activities, energy audits are one notable exception in which the utility is congressionally mandated to use ratepayer money to subsidize a business activity currently performed by small business. In addition, we believe that the commissions are not effectively controlling ratepayer subsidization of a utility's indirect costs.
2. Capitalization -- The utility may provide loans, loan guarantees, or other financial subsidies to a new business activity.
3. Administration and overhead -- Management, planning, accounting, legal assistance, research and development resources may be used by a utility to start up or operate other lines of business. In addition, office space, equipment or personnel of the utility may be available.
4. Name -- Instant name recognition is a valuable asset which a utility enjoys when venturing into a new market.
5. Credit information -- From customers' bill payment records, the utility has a built in source of credit information for use in other business activities.
6. Billing -- Postage, mailing and personnel costs are already being paid by the ratepayers. Adding charges for other business activity to the bill produces very little expense to the other activity.

7. Advertising -- In many states, advertising costs can be passed on to ratepayers. While advertising directly connected with an unregulated activity may need to be charged to that activity, there are many opportunities for the utility to also include material with advertising promoting its regulated activities. The postage for bill stuffers promoting a service contract is paid by ratepayers as part of their utility bill.

8. Direct mail -- With utility bills going out monthly and with immediate access to customers initiating or terminating service, utilities have the most up-to-date mailing lists in existance.

9. Market data -- To promote their fuel type, utilities frequently have extensive market data on their customers. This may readily be made available for marketing of its unregulated business activities.

10. Selective referral and market allocation -- With its access to information on consumer needs and requests, a utility can make or break a small business by arbitrarily referring or not referring business. That same market advantage can be of tremendous competitive value if the utility funnels the business to itself.

11. Direct from the manufacturer ordering -- With larger volume orders, the utility can circumvent usual distribution channels, such as suppliers, contractors and retailers, and buy direct from manufacturers with possible favorable pricing for bulk orders.

12. Consumer financing -- The utility's large capital base gives it the ability to provide favorable consumer financing. Financing may be added right on to the utility bill.

13. Consolidated tax returns -- The utility may reap financial benefits from consolidating its financial data for tax purposes.

These are some of the more significant benefits which a regulated utility monopoly will have which are not as readily available to unregulated small business. In fact, they may not be available at all.

ISN'T THIS A STATE ISSUE?

Why isn't this a state issue rather than a federal issue?

It is, in fact, an issue in many states as small businesses initiate and intervene in state commission proceedings. However, unfair utility competition is also an issue for federal public policy concern:

1) when state commissions or lead agencies decline to consider the issue of competition or conclude that they do not have authority over the unregulated activities;

2) when utility practices violate the antitrust laws;

3) when Congress requires utility activity;

4) when utility activities cross state lines preventing effective regulation by a state commission.

HOW IS THE CONSUMER AFFECTED?

It is also a consumer issue. If utilities are permitted to control the market or limit competition, consumer choice is reduced. Yet the consumer has been required by the state regulatory commission to subsidize the indirect costs of the utility to conduct its unregulated activities which are now reducing consumer choice.

The consumer would be better served if the unregulated activities of a utility are expensed at full, market-based costs and credited to the utility function. If a bill stuffer goes with the utility bill, all of the costs for the bill stuffer, postage and mailing would be charged to the unregulated activity. Such a proposal would lower rates since many of the indirect costs would no longer be charged to the rate payer, but to the unregulated activity.

WHAT COMPETITION CRITERIA SHOULD BE USED?

We were participants in the debate last year over the Residential Conservation Service (RCS) and the CACS programs. The House included competiton criteria in its passage of H.R. 5946 which would have reformed the RCS program.[1] We urge the Congress to provide authority to state public service commissions to apply similar criteria for utility commercial and apartment conservation programs.

If the Congress includes consideration of the RCS program in its review of the CACS, we urge that the competition protections adopted by the House last year for RCS in H.R 5946, Section 106 be included in the legislation.

If the Congress decides not to repeal CACS, but looks to modifications of either the RCS or CACS programs, we recommend the following changes to provide competitive protections and to provide an equal opportunity for small businesses to participate.

---

[1] H.R. 5946 provided that energy conservation programs could be terminated or appropriate competiton safeguards be included if

"1. The utility is not charging fair and reasonable prices and rates of interest,

"2. There are unfair competitive advantages to the utility (with respect to competitors such as small businesses),

"3. Such activity is inconsistent with the prevention of unfair methods of competiton or the prevention of unfair or deceptive acts or practices,

"4. The utility has not provided the governor with all documents and records he determines necessary to make determination under clauses 1,2,3" (Section 106 (c)(3))."

1. The utility should be required to contract out audits.
2. Utilities should be prohibited from advertising with either the audit announcements or audits.
3. Utilities should be prohibited from providing audit results to their marketing department or using other market advantages where they have a conflict of interest.
4. Utilities should not be allowed to promote fuel switching.
5. Utilities should be prohibited from supply, installation, and service.

The utility should be required to contract out audits.

Many of our small business members currently provide energy audits of residential and commercial establishments. Engineers, contractors, and others are trained and qualified to conduct the audits. Some do them exclusively, while others use them in conjunction with other services they offer the public.

The RCS and CACS plans enhance the market for energy audits. Regretably, those audits are set-aside to be carried out by the utilities exclusively. In fact, it promotes energy audit activity by utilities to the detriment of small business.

For single and multifamily residential buildings, the audits must not cost more than $15.00 per unit by law. For commercial establishments, no price has been set, but the Department of Energy rules suggest that audits could be offered free. Such audits will most likely be subsidized by rate payers. Clearly, busineses currently conducting energy audits cannot compete against below cost service. The audit part of the RCS and CACS plans take businesses away from existing small business entities which currently conduct them.

We recommend that utility companies be required to contract out the audits to private enterprise.

Utilities should be prohibited from advertising with the audit announcements or the audits.

The RCS and CACS Programs have several deficiencies. They provide the utility with access to the consumer for energy conservation activities. Although the programs limit utility advertising, they still provide opportunities for utilities to promote their own business activities. For example, a utility may request an exemption to permit it to include advertisements with the audit announcement.

Furthermore, a utility which is already involved in supply, installation, or service activities will already be routinely advertising or mailing literature to residential and commercial consumers. Certainly, these consumers will make the connection that the advertising provided by the utility through its marketing function is the same utility conducting their audit. The utility's name is inseparably linked to both. Preferably, the utility should be prohibited from supply, installation, or service altogether, particularly when it is also involved in auditing.

Utilities should be prohibited from providing audit results to their marketing department or gaining from any conflict of interst.

The utility should not be granted exclusive access to audit results. Utilities already have a great deal of data on consumption, credit, etc. to market products and services to residential and commercial consumers. To now permit them exclusive access to audit results is to grant them control over the market for energy conservation activities, should they desire to use it.

Recommendationas made by auditors provide measures which can be taken to promote energy conservation. This market should be available in a fair, open, and competitive manner.

The utility should not be allowed to promote fuel switching.

The RCS and CACS programs have recognized the potential problems created by utilities which promote fuel switching. The DOE retained fuel switching protections in the federal RCS and CACS plans. Unfortunately, it left it totally discretionary for state CACS programs.

The current requirement under RCS and CACS that a consumer request an audit in writing is inadequate protection against the utility auditor entering an oil heated residence, apartment, or commercial building and unfairly promoting the conversion of that residence to the utility's source of energy. The utility is not required to notify the consumer or building owner that the utility has a potential conflict of interest, nor is the fuel dealer who currently serves that consumer notified that an audit by his/her competitor (the utility) has been performed on the heating system.

Utilities should be prohibited from supply, installation and service.

Utilites were granted monopoly status so that they could efficiently provide gas and electric service. In return for regulation, they are guaranteed the opportunity to make a profit. Other businesses in the economy vigorously compete and have no assurance of profit. utilities should not be permitted to compete in these tradionally unregulated markets of supply, installation, or service when they can draw upon the market advantages of their monopoly which has been paid for by the rate paying consumer.

The Regulatory Flexibility Act should apply.

Despite the repeated assertions by the Department of Energy that a Regulatory Flexibility Act analysis is not necessary, Congress should assert that the Act does apply to the impact RCS and CACS programs will have on small business. We assert that there is a substantial economic impact on a large number of snall businesses which warrants conduct of a Regulatory Flexibility Act analysis. The mere existence of the Alliance for Fair Competition representing 4.5 million small businesses, should be a clear indication that there is a great deal of concern within the small business community over unfair and anticompetitive acts or practices by utilities which these programs may enhance.

The Regulatory Flexibility Act does not just limit itself to direct economic impact. The formation of the Alliance for Fair Competition, has demonstrated that there is a substantial interest in the economic impact of utility practices. There are a number of organizations representing a substantial number of small entities who are concerned with the economic impact of energy audits and supply and installation programs that may be conducted by utilities.

CONCLUSION

There has been substantial growth and sensitivity by the small business community to market disruption caused by utilities who are mandated to conduct conservation activities. Part of that realization has come about as a result of identifying significant intrusions by utilities into traditional small business markets.

The RCS and CACS programs have already been put in place by many states and utilities. If the Congress repeals either or both, that action does not eliminate the programs, but only the federal mandate. Injury to the competitive free marketplace is already underway. It may be enhanced by removal of federal restrictions against unfair or anticompetitive activity which the states may lack authority to control.

If Congress decides to repeal the programs, transition provisions should be provided in the legislation to provide states with the authority to control unfair or anticompetitive acts or marketing practices.

If Congress modifies the programs, you should include effective mechanisms to protect against unfair competition and provide equal competitive opportunities.

Thank you for this opportunity to comment on S. 410 and the RCS and CACS programs.

2262G

May 2nd, 1965

Senator NICKLES. Mr. Lavin, I appreciate your comments, and to all of our panelists, and I apologize for the necessity of being in and out, but I have to testify before another committee on a bill which I was principal sponsor of. Senator Johnston has been kind enough to say that he would—he's been here all day and this is his legislation and he has an interest and the lead, and I am pleased, Senator Johnston, to join you as co-sponsor of your legislation and I'll turn the hearing over to you.

Thank you.

Senator JOHNSTON [presiding]. Thank you, Mr. Chairman.

Mr. O'Connor, you talked about delegating the power to the States, power over energy conservation, over anticompetitive matters here, as a matter of transition. How long a period of transition are you talking about?

Mr. O'CONNOR. I think we're actually talking two separate things, Senator. One would be for those States who intend to move forward with their CACS-type program even if there is a repeal at the Federal level, that those States should be given transitional authority and transitional authority may not be the best term. They should be given the authority to continue to enforce the competitive provisions that they have put into their State plan.

Senator JOHNSTON. Now you understand that States would have that power in the State legislature? They have that power anyway. What you're talking about is the power of the PUC's or other regulators to do it?

Mr. O'CONNOR. For the regulators to continue; otherwise a State program might continue but the competitive provisions would have to be stripped out of that program until they could be reinstated by the State legislature, and it could take 2 or 3 years.

We're saying that if the program continues the competitive provisions should continue.

Senator JOHNSTON. Well, now if we allowed for a transition period, say to allow the administrative provisions to stay in place for a year, wouldn't that be adequate transition time? That would surely be time to get legislation passed in the State legislature, wouldn't it?

Mr. O'CONNOR. In some cases, no. In some States it may take 2 or 3 years. I mean, there have been other cases where Washington has tried to delegate authorities to the States. In one case with the Environmental Protection Agency, the recent underground tank legislation, it has given the States up to 3 years to bring their State law in accordance with the Federal law. So 1 year may not be a suitable benchmark.

It also depends on the State. Some States, you know, may be able to act faster; some won't.

Senator JOHNSTON. Well, you are for repeal; you're simply for a transition rule?

Mr. O'CONNOR. We would be for repeal as long as there is a transitional provision and we also would recommend that in the event of repeal that the Congress make clear to the States what the State role should be in energy conservation, so, as Senator Ford has been pointing out, Congress simply doesn't throw up its hands and say energy conservation is no longer a concern of the Federal Government.

Our recommendation would be that you delegate the authority for energy conservation to the States and have the States then be responsible for implementing energy conservation under some certain type of ground rules that you set forth.

Senator JOHNSTON. Mr. McDonald, we've heard testimony here today that, including testimony from the Acting Assistant Secretary, that this would result in subsidized rates for these energy conservation. That is, the owners of apartment buildings and commercial buildings would be able to get a cut rate service that, in turn, would be paid for by the mass of ratepayers, most of whom would be much further down on the economic scale than the recipients of the subsidized rate.

Do you have any information on that, or is that a concern to you?

Mr. McDONALD. Well, the Energy Conservation Coalition has information on that, yes. Basically it's that with the audits and the resulting improvements that would be implemented that we could reduce the need to build new generating capacity, No. 1, which would help all the ratepayers, those people supplying the subsidies, and also from the standpoint of reducing the need to increase our oil imports from the savings that could be achieved through the program.

That would also benefit the consumers. And also from the standpoint of just reducing our consumption of nonrenewable resources is also a major benefit. So from that standpoint, from those standpoints, rather, that's——

Senator JOHNSTON. You heard the Assistant Secretary say this morning that it looks like they can save no more than two-tenths of 1 percent of the energy used in commercial and apartment use. That would save us about three-thousandths of a quad worth of energy, but the value of this energy would far be exceeded by the cost of the program.

Do you have any information contrary to that?

Mr. MCDONALD. Well, we do. Basically, DOE's own research, I think, a 1979 study where I got my figures from showed that apartment energy consumption could possibly be reduced by an upper limit of about 40 percent, as I mentioned, and that's with about a 3-year payback. So within the aspect of that——

Senator FORD. Don't worry, Mr. McDonald, we allow actors in the room.

Mr. MCDONALD. Thank you very much. Within the context of that, we believe that the commercial and apartment conservation service would go far in achieving at least a reasonable percentage of that level.

Basically, a number of the apartments, you walk into them and they don't even have clock timers, things like that, that can achieve a 5- to 10-percent savings. I think that DOE's own research will show that you can achieve a significant amount of retrofits in this area.

The main thing with the CACS Program is that it's an information program. And that's one of the chief problems with the apartment area. As I mentioned in my testimony, it's one of the least solvable in the energy conservation field.

The CACS Program would be important in giving not only the tenants but also the owner information about what can be done. It would get the two camps to talking instead of the landlord just increasing the rent and the tenants getting mad and either trying to move out or just trying to meet that payment.

Also, from the standpoint of the capital constraints, I think that's very important, and if there is information supplied to both the tenants and the owners concerning the possibilities and the different alternatives for coming up with financing for these various improvements that neither the landlord nor the tenant are interested in implementing, I think that would help improve the effectiveness of energy efficiency retrofits in apartment buildings.

Also, one other very important aspect is the complexity of retrofit technology. Right now, especially in the CACS Program, you're looking at probably boiler retrofits. That's what my information showed; 50 percent of energy used is in space heating, 30 percent in water heating. That's the first place that these auditing firms or retrofit firms, that's the first place they are going to look.

Well, the tenants don't really know that much about boiler room retrofits. The owner probably doesn't know that much. And if the utility audit can supply information that would assist them any in that area, I think that would be very helpful in increasing the amount of audits and the response to the program and potential retrofits.

Senator JOHNSTON. Mr. Spielvogel, we'll give you a chance to reply to that.

Mr. McDonald. Also, Mr. Chairman, I promise not to wave my arms about.

Mr. Spielvogel. Mr. McDonald's facts and figures are seriously in error and don't even apply to the law at hand. The numbers that he quoted for apartment houses were for all apartment houses, and CACS specifically covers, as Secretary Fitzgerald said, only those multifamily apartment houses having five or more units and having central heating and cooling systems. All the other, majority of apartment houses are already covered under RCS.

And as far as the savings go, again you're going to have to overcome the serious flaws I've identified, for example, where 50 percent of the energy use is going into the boilerroom for space heating. If that apartment owner's economic best interest is served by converting from oil to gas heat, the gas company or the electric company that audits that complex is barred by law from recommending it, and if that makes good economic sense or good energy sense, I think we have a thing or two to learn.

Senator Johnston. Well, now are there sufficient people in the private sector who are in your business to give the service to commercial and apartment owners?

Mr. Spielvogel. Without question.

Senator Johnston. Is there any communication problem between you and these commercial and apartment owners?

Mr. Spielvogel. None that I'm aware of.

Senator Johnston. Well, why don't they all use it? Or do most of them use it who need it?

Mr. Spielvogel. To one extent or another, most of them do something, and the question is what they feel is appropriate, what they feel works. There are a lot of risks, economic risks, associated with doing this work, technical risks, ownership risks, tax risks. So there are a lot more concerns than just purely saving energy, not the least of which is saving money.

Senator Johnston. Senator Ford.

Senator Ford. I find a pretty good difference between one end of the table to the other here. That always makes for an intereting hearing.

Mr. O'Connor, since you were the lead, I guess you bear the brunt of most of the questions for your group of four. Do I understand you right that you want everything repealed except the gas and electric companies who are making a killing out of this thing? You want some kind of a control over them. Am I basically right in that question?

Mr. O'Connor. I think what we're saying, Senator, is that if programs continue at the State level that those programs should include public discussion and regulatory review to ensure that those programs do not provide a competitive advantage to a utility company, an advantage that would be, that could hurt an engineering firm, a contracting firm, or a wholesaling firm.

Mr. McDonald talked about the 50 percent of improvements in apartment buildings could come in boiler retrofits. Our problem comes when we have a utility like Bay State Gas in Massachusetts that would do the audit and at the same time leases or rents replacement boilers. That's the kind of problem we have.

No, sir; we're not saying the program should be repealed and only those utilities that are making a killing should be supervised or restricted. We're saying that if the program is repealed, that programs continue in these States, those programs should continue to be subject to regulatory review, and part of that review should be—go to the question of competition and fairness and to who can best deliver energy conservation.

Can the utility best deliver it or can the private sector best deliver it?

Senator FORD. Why can't you leave that to State law?

Mr. O'CONNOR. Senator, in most States, many States, the State public service commissions are not authorized to look at questions of competition. The Massachusetts Public Service Commission is not authorized to consider questions of competition. The Maryland Public Service Commission is not authorized to look at questions of competition.

Senator FORD. I have a difficult problem when you say leave it to the States and we hear States rights, you know—oh, boy, do we hear it—until they're in trouble. Then they come up here and say we'll repeal everything because most States can't do that and you solve the question here. If it's not good, why in the hell don't we get rid of it?

Or, you know, why don't we just say let the States do their thing. If you're from Massachusetts, get the law changed. You've got SMACNA, or whatever it is, that we're talking about here a while ago, that SMACTA-BACKTA, or whatever you've got there. [Laughter.]

I didn't quite understand it, Mr. Reckinger, but that's your PAC, as I understand it. Well, you can help your legislators. You can get some elected and begin to pass a bill—that's what you're doing right now—in the various States. I think it would be easier to hit it on 50 fronts than it would be to come up here and go against what you're going against.

You can't get around utilities in your own State.

Mr. O'CONNOR. It's not easier to fight it on 50 fronts. One of the things that has come out of the Federal CACS and RCS Programs, I attended a meeting of the National Association of Regulatory Utility Commissioners last year, their gas committee, and we made, the alliance made a brief presentation on the competitive problems.

And one of the State commissioners said, well, we can do nothing about it. The Federal Government has told us that utilities must be involved in supply and installation. Now the Federal Government has sent a signal to the States that the States have interpreted as being the utilities should be involved in energy conservation and there should be, if little, restrictions placed on the utilities.

You know, a simple repeal does nothing to take away that opinion the States have.

Senator FORD. Well, the thing that disturbs me or flies into the face of your—and I'm just trying—I've got to make a decision. I'm asking a lot of questions that may not indicate the way I'm going to vote, but in reading utilities who testify next, they basically feel the same way you do, just get rid of it.

They don't want it. So if they've got an advantage over you, why are they up here asking for the repeal of it?

Mr. O'CONNOR. Mr. Chairman——

Senator FORD. No, he's chairman. I'm just one of the younger ones here. [Laughter.]

Mr. O'CONNOR. Let me first provide——

Senator FORD. That's also in age. [Laughter.]

Mr. O'CONNOR. I've got some children in grade school and they don't like to go to school except on days when they have PE or music. My little boy, 8 years old, knows that when he's going to go to school he's going to have PE at 9 in the morning. He wants to go. If he's got math at 9 in the morning, he's not crazy about going.

I think the same situation with these audits, whether it's an RCS audit or CACS audit. We hear in the RCS Program the utilities don't want to do those audits. They don't want to do RCS audits under RCS regulations. A survey conducted by the American Gas Association, a survey conducted prior to enactment of the RCS law in 1978, showed that 49 percent of gas utilities were already engaged in residential audits.

Utilities want to provide the audits. At least in the RCS case there's evidence that they were providing them far in advance of the Federal law. They just don't want to do it under your ground rules or DOE's ground rules. They will do audits if they can do it their own way. That's what I think they're really saying, is don't tell us how to do it; we'll do it our own way.

The same as my 8-year-old. He'll go to school when he wants to.

Senator FORD. Well, let's get back then. You used your 8-year-old as a criterion here. I've always heard that when he has the proper teaching at home, he doesn't mind going to school. [Laughter.]

And so if the States have the proper teaching, why not let the States take care of it? That's what I'm saying here, you know, and I'm in my second cycle, Mr. O'Connor. I have grandchildren from 4 months to 10 years, so I'm in my second cycle trying to get them to go to school, and the third grader—9 years old or 10 years old—is on her second computer and she got one for Christmas. I don't know what's going on, but she still gets spanked.

So, you know, there's a lot of things going on we have to cope with, and it's very difficult for me to say part of it's good and, you know, I've got a little sign in my office that says "If it's wrong, anything to correct it makes it worse."

One thing, I want to make a point here, if I can. I'm not sure I can pronounce Larry's name correctly, but you're at the end of the table and you and I probably could go and get along all right before the day is over, but I come from basically a rural State, and there is no way that we can get the rural housing or rural programs out to the rural resident without going through a utility.

And if we don't go through utilities, they basically will not get the kind of help that the urban dweller will. I see Mr. Hughes shaking his head and he's been on both sides. Hell, he advised us to write this bill, probably. [Laughter.]

Senator FORD. And you take the information. They come up here with all the statistics and we go back to Mr. McDonald's statement on how much can be saved. They don't tell you all of it. It's just like the unemployment stayed the same the last 2 months. They didn't go behind it and say 30 States had higher unemployment, you know, last month, and only 20 States had reduced unemployment. And the reason we have reduced unemployment was the military-industrial complex helped some in those States.

I know how great—those who want it find a way to make it look better and those who don't want it might find a way to make it look worse, and somewhere between better and worse we've got to make a decision. And if you all want to refute anything I've said, just go ahead, except the family problem, Mr. O'Connor.

Mr. Hughes, do you want to doctor me up a little bit?

Mr. HUGHES. I'd like to make a couple of comments. First of all, Congress appropriately determined there was a problem in the 1977 to 1979 timeframe and set about a program to try to reduce energy consumption, our dependence upon other sources of energy. By the time CACS and RCS finally got into rulemaking and got enacted, the buildings in this nation had already reduced their consumption 20 percent because they also recognized this problem.

Now one of the real faults I find with the rulemaking process and with the people who are sitting in these laboratories developing the methodologies of their fancy computer programs and so on is the tremendous lack of understanding of how business is conducted and how energy efficiency takes place. They, for example, will tell you that if you put in 12 inches of insulation you will get twice the energy savings as if you put in 6 inches of insulation. Any of us in practice know there are diminishing returns.

It's much more difficult to take that 20 percent energy savings to 30 percent and 40 percent. It gets much more difficult, much more expensive, to do so. The nature of these buildings under the CACS bill are rather unique. Apartments, for example, with only one wall facing the outside, the others being faced on all sides by neighbors, doesn't have nearly the energy savings potential and envelope, for example, as a single family home standing out on a hillside in Kentucky.

So the nature of this has to be understood by those people setting down the rules and the methodologies under which these auditors, under a cookbook fashion, comes in and checks off the ingredients and tries to determine, without much experience really, technical experience and understanding of how the building is going to function and how the countervailing effects might be on the environment within the building.

You cut the light levels in a building and people can have accidents. You cut the light levels and the efficiency of operation of the people working in it isn't there. I mean, that's a natural resource, too. So if we decrease our efficiency of operation by 5 percent in order to be able to decrease the energy consumption by 2 to 5 percent, is the Nation better off?

I think there has to be some countervailing influences and thoughts in this development, and I really think the professional who has design and engineering experience, even the professionals are marketing their wares in the marketplace, the plumbing and heating contractors, know much more efficiently than national laboratory professionals, who really don't understand what's happening out in the marketplace. And I've worked with both groups of people.

Senator FORD. Well, we had an economist before this committee the other day who said the reason we have a glut on the market is because the product's overpriced and we have a shortage, it's underpriced. Now fight that one, will you? You know, and when you get back to rulemaking, I doubt if you could ever curtail public hearing, having public input into rulemaking. You've got to give the public an opportunity to respond, and that's part of letting everybody say their piece.

We're back reacting again. Since things are doing so well, and we've got so-called energy glut on the market, why everybody's saying let's kind of leave it alone. But I heard here this morning that if you go to cogeneration, it saves 8 to 12 percent of the cost, yet adding that on line it increases the energy.

And Larry sat here a few minutes ago, when you reduce the amount of consumption it increases the price. Well, sure, I understand that. You try to explain it to the consumer in Kentucky. When you reduce the amount he burns or uses, the cost is higher. The more he burns, the less it costs. So you reduce that down. Try water in California. I've watched it all, and we're in a catch-22. We can't solve it all and we can't leave it up to every State, just like the energy when we came on appliance efficiency here.

If we left it up to every State to have their standards, one Sears, Roebuck store in, I think, Bristol, TN, or someplace where three States come together, they would have had to have three refrigerators, three stoves, three everything in order to comply with the three States that had the Sears, Roebuck store right there where those States came together.

We had to preempt State law in that case in order to have a 2-year period in which all the standards would be uniform, and maybe that worked, maybe it didn't. After the 2-year period, we turned it loose. Maybe that's what we ought to do here.

But we can't satisfy everybody and we can't preempt the States unless we have a darn good reason to make it uniform. And I'm still frightened to death when we look for hydrogen to get the space ship off and we do all those sort of things. Where are we going to get it? Tell me where we're going to get it. We're not going to get it from finite resources being depleted every day, 900 billion gallons of oil used, every year in this world, and about 30, 35 percent of known reserves are gone.

And we look at the history and story it curls your hair a little bit, when you look at the facts that are there and actual happenings, yet we sit here on the Energy Committee trying to work out something, and find something that's wrong with it after the fact.

Mr. HUGHES. Senator, if I may be so bold——

Senator FORD. You can be as bold as you want to. You're bigger than I am. [Laughter.]

Mr. HUGHES. I agree with you that there is a need for a national energy policy and the U.S. Senate, the U.S. Congress certainly has a right and perhaps an obligation to be involved in some of these areas. But picking targets of opportunity is what I am talking about.

All these buildings available under this program use a total of about 2 percent of the Nation's energy. If you saved 100 percent of the energy in all those buildings, it would save about 2 percent of the Nation's energy. You know that isn't going to happen. The projections are that maybe 5 percent of them will participate over a period of 5 years time, that they may see, each one, an average of 3 to 5 percent a year.

Add that up. You know, it's 0.05 times 0.05 is a pretty small amount of energy. In fact, I think perhaps if somebody took the time to figure it out, the amount of energy spent in the public conveyances we all took to come to this hearing probably was more than will be saved under this program in a year's time if it's operated efficiently.

Senator FORD. Well, you'll charge it off as a cost to government indirectly anyhow.

Mr. HUGHES. I wish I could.

Senator FORD. But it's just like a teacher told me. It wasn't cost-effective to teach a child in a poor county. Now something's wrong with that kind of statement, when you say it's not cost-effective to teach a child in a poor county.

That's just like we're looking at the major apartments where you have the low income people and we're trying to help them. It's saying to them go ahead and move, because we don't put the pressure on. How do you put the pressure on to make it more effective so you can keep the rates down? I mean, what do you do up here? If you turn them loose and have no direction, no tie as it relates to try to work out something, then we find ourselves or I find myself, let's put it that way, like a ship without a rudder.

We're out there being tossed around and everybody's coming down to say when we had something in 1977 and 1979 we were really in trouble. We needed help. Anything we could do to save that finite resource we ought to try to do, and then we tried a little bit of everything, even SPRO, and we're reducing that now. As the price of oil comes down, we're not even putting more in.

We ought to be putting it in when it's cheap 'cause it's coming one of these days. But we sit here saying no, we won't do these things. Just back off.

Mr. HUGHES. You know, Congress did do something. They did deregulate oil. There are other avenues. The private sector, in the meantime, was working on the conservation side. While certainly something could be done on the supply side, they're both parts of the equation of supplying an adequate amount of energy efficiently to provide our needs.

So maybe deregulating gas is another thing to look at.

Senator FORD. I thought we had. Everything that was on stream before 1977 went out January 1, 1985. Mr. Hughes, I believe that's correct, isn't it? So we've already done that.

You feel anything out there since it's deregulated, you know, feel any better about it? You got more on line? You don't have it?

Mr. HUGHES. Gas is less at the pumps.

Senator FORD. It just went up 8 cents in the last 14 days. It's $1.60 right outside the District here for high test. You think that gasoline's gone down? Tell me about it.

Senator JOHNSTON. Let's get on with this next panel.

Senator FORD. I don't mind. I'm having fun. [Laughter.]

Look, this is what it's all about up here. You know, he's hungry and I'm getting ready to leave and he's got another panel.

Senator JOHNSTON. Senator Ford's in rare form.

Gentlemen, thank you very much. You've been an excellent panel.

Before you go, let me just ask one question as a matter of interest. How many of you think the RCS Program has been a success? Would you raise your hand?

Mr. McDONALD. Mr. Chairman, I would like to respond to that. I believe that if the program——

Senator JOHNSTON. Just yea and nay. How many feel it has been a failure?

[A show of hands.]

Senator JOHNSTON. And the rest are a little tentative?

Thank you very much, gentlemen.

Next we have a panel consisting of Mr. Maxie Davie, vice president of corporate affairs at the Texas-New Mexico Power Co. of Fort Worth, representing the Edison Electric; and Mr. Neal Hall, vice president for Community Relations of Lone Star Gas in Dallas. He's accompanied by Jannette Moser, representing the AGA.

Gentlemen.

STATEMENT OF MAXIE DAVIE, VICE PRESIDENT, CORPORATE AFFAIRS, TEXAS-NEW MEXICO POWER CO., ON BEHALF OF THE EDISON ELECTRIC INSTITUTE

Mr. DAVIE. Thank you, Mr. Chairman. My name is Maxie Davie. I am vice president of corporate affairs for Texas-New Mexico Power Co. Part of my responsibilities for Texas-New Mexico Power Co. is to supervise the customer service department, which is responsible for all conservation programs for our company.

Today I am speaking not only for my own company but on behalf of the Edison Electric Institute, which represents this Nation's investor-owned electric utilities. EEI member companies generate 75 percent of all electricity in this country and serve more than 74 percent of all electric customers.

The necessity for promoting energy efficiency and modifying the demand for electricity is well established. No electric utility wants to expend funds to build new plants if it can reduce demand in a manner that will be less expensive than the capital outlays for new plants and that will produce a more efficient use of existing generating capacity.

However, because of the unique load characteristics of each electric utility any energy efficiency or load management program will be much more cost-effective when designed specifically for the individual characteristics of each company. In practice this involves modifying customer demand characteristics in ways that will minimize the need for additional generating capacity and use existing capacity efficiently.

Clearly, the attainment of these objectives is in the interest of everyone. EEI has published a three-volume set on the topic of demand side management for use by our member companies and I have attached volume I, an overview, to my written statements for your information.

EEI recently surveyed its members concerning the effectiveness of the RCS and CACS Programs and the cost of the programs. My written statement includes a copy of the questionnaire and the results for the record. The responding utilities represent 83 percent of the residential customers and 93 percent of the commercial customers of EEI member companies.

Forty-six percent of the respondents indicated that they had an existing program that would meet or exceed the requirements of the CACS Program. The companies with existing programs indicated a very high customer response rate. The average participation under existing programs is 9 percent for small commercial customers and 13 percent for large commercial customers. In comparison, the anticipated annual response rate for the CACS Program is 2 percent.

These companies believe there will be little additional response resulting from implementation of the CACS Program. The difference between response rates between existing programs and the CACS Program could be explained by the fact that existing programs are designed for specific customers and both the customers and the utility can benefit from such programs.

The motivation of a commercial customer to take some action as a result of an energy audit is likely to be more complex than with residential customers. A small business will take into account the tradeoff in energy savings versus comfort and investment cost. However, a business must first be concerned with profitability. Therefore, a potential energy conservation investment competes with other, more direct investment opportunities on a return on investment basis.

Accordingly, a small fraction of eligible commercial customers will take advantage of the data reported in an energy audit where a payback on programs can take as long as 7 years.

Over 80 percent of the survey respondents indicated that existing programs or modified commercial audit programs that are based on local characteristics would be more beneficial to the customer than the Federally mandated CACS Program.

Finally, we have encouraged the enactment of this legislation as soon as possible in order to avoid the incurrence of costs associated with the startup of the program. According to the survey, only 18 percent of the responding companies anticipate offering the CACS Program prior to June 30 of this year.

Startup costs for CACS Programs are anticipated to be just under $11 million for the investor-owned electric utilities. Of these costs, only $4 million will be spent prior to June 30, 1985. Thus, as much as $7 million could be saved with immediate congressional action.

On the topic of costs, the survey indicated that the cost of a CACS audit, including overhead, labor charges, travel and other incidental charges, is anticipated to be $240 for a commercial customer and just over $200 for a multifamily customer. At my company we estimate the cost of the audit to be between $500 and $600. In comparison, the charge for the CACS audit nationally will average about $100 for a commercial customer and $45 for a multifamily customer.

The total costs for the CACS Program are estimated at $35.5 million a year. The utility stockholders and customers who did not participate in the audit program will subsidize an estimated $20.5 million each year for unrecovered expenses by customers who participate in the CACS Program. It is EEI's position that this expenditure is unwarranted in the light of the lack of cost-effective energy conservation measures expected to result from the CACS Program.

Although we are concerned with CACS today, I would like to touch on my company's experience with RCS. In my company's case, thus far it has cost us $390 for each RCS audit. Approximately six-tenths of 1 percent of our customers had audits. Statewide figures revealed less than 1 percent response rate for all Texas utilities. Consequently, all companies in Texas and New Mexico have experienced a high cost per audit.

Even more disturbing to me is what we found in following up to see what actions our customers took in response to our recommendation. Not one customer had implemented all the programs that were cost-benefit justified. It is our belief that the CACS Program will have similar results.

My company, along with the other EEI members, have fulfilled the RCS Program requirements for 4 years. Our experience shows that a Federally mandated audit program is not the most cost-effective means to achieve energy conservation and the utility-designed audits are clearly preferable.

Based on the lessons and history of the RCS Program, Congress should pass S. 410 as introduced, thereby removing the Federally mandated CACS Program that requires utilities, shareholders, and their customers to spend substantial sums of money on the program that will not be cost-effective.

In conclusion, I hope that Congress sees fit to remove this regulatory burden and let us get on with the business at hand of providing our customers with cost-effective programs and services.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Davie follows:]

EDISON ELECTRIC INSTITUTE The association of electric companies

1111 19th Street, N.W.
Washington, D.C. 20036-3691
Tel (202) 828-7400

STATEMENT OF THE EDISON ELECTRIC INSTITUTE

BEFORE THE

SUBCOMMITTEE ON ENERGY CONSERVATION AND REGULATION

OF THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

PRESENTED BY:

MAXIE DAVIE
VICE PRESIDENT, CORPORATE AFFAIRS
TEXAS-NEW MEXICO POWER COMPANY

MAY 6, 1985

I. INTRODUCTION

GOOD MORNING, MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE. MY NAME IS MAXIE DAVIE. I AM VICE PRESIDENT-CORPORATE AFFAIRS FOR TEXAS-NEW MEXICO POWER COMPANY. TNP IS AN ELECTRIC UTILITY SERVING FIVE DIFFERENT GEOGRAPHICAL AREAS IN TEXAS AND ONE IN THE SOUTHWESTERN REGION OF NEW MEXICO. WE ARE PRIMARILY A DISTRIBUTION COMPANY, PURCHASING MOST OF OUR POWER FROM NEIGHBORING UTILITIES. WE SERVE OVER 191,000 CUSTOMERS IN THE TWO-STATE AREA. OUR TOTAL REVENUES ARE SLIGHTLY OVER $400 MILLION ANNUALLY. ONE OF MY RESPONSIBILITIES FOR TEXAS-NEW MEXICO POWER COMPANY IS TO SUPERVISE THE CUSTOMER SERVICES DEPARTMENT, WHICH ADMINISTERS ALL OF OUR COMPANY'S CONSERVATION PROGRAMS.

TODAY, I AM SPEAKING NOT ONLY FOR MY OWN COMPANY, BUT ON BEHALF OF THE EDISON ELECTRIC INSTITUTE (EEI), WHICH REPRESENTS THIS NATION'S INVESTOR-OWNED ELECTRIC UTILITIES. EEI MEMBER COMPANIES SERVE 97 PERCENT OF THE CUSTOMERS OF THE INVESTOR-OWNED SEGMENT OF THE ELECTRIC UTILITY INDUSTRY. EEI MEMBER COMPANIES GENERATE 75 PERCENT OF ALL ELECTRICITY IN THE COUNTRY AND SERVE MORE THAN 74 PERCENT OF ALL ELECTRIC CUSTOMERS IN THE NATION.

ON BEHALF OF TEXAS-NEW MEXICO POWER COMPANY AND THE OTHER COMPANIES OF EEI, I APPRECIATE THE OPPORTUNITY OF PRESENTING TESTIMONY IN SUPPORT OF S. 410, THE SENATE BILL WHICH WOULD REPEAL THE COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS) PROGRAM, INTRODUCED BY THE HONORABLE BENNETT JOHNSTON OF LOUISIANA.

THIS INDUSTRY IS PROUD OF ITS RECORD OF ASSISTING ITS CUSTOMERS IN ENERGY CONSERVATION. WE COMMEND CONGRESS FOR FOCUSING ATTENTION ON THE NEED TO REDUCE UNNECESSARY, INEFFICIENT USE OF ENERGY. THE GOALS OF THE 1978 NATIONAL ENERGY CONSERVATION POLICY ACT, ONE OF WHICH WAS TO MAKE THE AMERICAN PUBLIC AWARE OF POSSIBLE CONSERVATION TECHNIQUES, WERE NOBLE. HOWEVER, MANY PROGRAMS ENACTED IN THE NAME OF ENERGY CONSERVATION, SPECIFICALLY THE RCS AND CACS PROGRAMS, HAVE NOT RESULTED AND, WE BELIEVE, WILL NOT RESULT IN DEMONSTRABLE REDUCTION OF ENERGY USE NATIONALLY. FURTHERMORE, THEY HAVE NOT BENEFITED AND, WE BELIEVE, WILL NOT BENEFIT THE PUBLIC OR UTILITIES SIGNIFICANTLY.

II. THE IMPORTANCE OF DEMAND-SIDE MANAGEMENT

IN THE INVESTOR-OWNED ELECTRIC UTILITY INDUSTRY, THE NEED TO PROMOTE EFFICIENT USE OF ENERGY AND TO MODIFY THE DEMAND FOR ELECTRICITY IS WELL-ESTABLISHED. NO ELECTRIC UTILITY WANTS TO SPEND FUNDS TO BUILD NEW POWER PLANTS IF IT CAN REDUCE DEMAND THROUGH COST-EFFECTIVE TECHNIQUES AND SHAPE DEMAND SO AS TO USE EXISTING GENERATING CAPACITY MORE EFFICIENTLY. DEMAND-SIDE PROGRAMS MUST BE DESIGNED SPECIFICALLY FOR THE UNIQUE CHARACTERISTICS OF EACH SERVICE TERRITORY IN ORDER TO PROVIDE FULL BENEFITS TO THE CUSTOMERS AND THE UTILITY.

THUS, ELECTRIC UTILITIES HAVE DEVELOPED AND IMPLEMENTED PROGRAMS THAT FOCUS ON MODIFYING CUSTOMER DEMAND. FOR EXAMPLE, INCENTIVES ARE OFFERED TO COMMERCIAL CUSTOMERS WHO SHIFT THEIR PERIODS OF HIGH ELECTRICITY USE. THIS CHANGE IN DEMAND ENABLES

THE ELECTRIC UTILITY TO USE ITS GENERATING CAPACITY MORE EFFICIENTLY OR FORESTALL THE NEED TO BUILD NEW PLANTS. CLEARLY, MODIFYING DEMAND AND CONSERVING RESOURCES ARE IN THE INTEREST OF THE ELECTRIC UTILITY INDUSTRY, THE CUSTOMER, AND THE NATION. EEI HAS PUBLISHED A THREE-VOLUME SET ON THE TOPIC OF DEMAND-SIDE MANAGEMENT FOR USE BY MEMBER COMPANIES. I HAVE ATTACHED VOLUME I: AN OVERVIEW, FOR YOUR INFORMATION. EEI BELIEVES THAT THE VIGOROUS, CREATIVE EXERCISE OF MARKETING PRINCIPLES, ONCE USED TO SIMPLY BUILD LOAD, CAN AND MUST NOW BE USED TO SHAPE LOAD IN WAYS THAT WILL BE OF ENORMOUS VALUE TO ALL CONCERNED.

III. RCS/CACS COMPANY SURVEY

IN ORDER TO PROVIDE INFORMATION WHICH WOULD ASSIST IN EVALUATION OF THE CACS PROGRAM, EEI RECENTLY SURVEYED ITS MEMBERS CONCERNING THE EFFECTIVENESS AND COSTS OF THE RESIDENTIAL CONSERVATION SERVICE (RCS) AND CACS PROGRAMS. I HAVE ATTACHED A COPY OF THE QUESTIONNAIRE AND THE RESULTS FOR THE RECORD.

A TOTAL OF 109 UTILITIES RESPONDED TO THE QUESTIONNAIRE. THESE COMPANIES SERVE OVER 54 MILLION RESIDENTIAL CUSTOMERS AND OVER 7 MILLION COMMERCIAL CUSTOMERS. THE RESPONDING UTILITIES REPRESENT 70 PERCENT OF ALL EEI COMPANIES COVERED BY THE RCS AND CACS PROGRAMS. THE RESPONDENTS SERVE 83 PERCENT OF ALL MEMBER COMPANY RESIDENTIAL CUSTOMERS AND 93 PERCENT OF ALL MEMBER COMPANY COMMERCIAL CUSTOMERS.

I WILL LIMIT MY REMARKS PRIMARILY TO THE CACS SECTION OF THE SURVEY.

FORTY-SIX PERCENT OF THE RESPONDENTS INDICATED THAT THEY HAD AN EXISTING PROGRAM DESIGNED FOR THEIR COMMERCIAL AND APARTMENT SEGMENTS THAT WOULD RESULT IN GREATER CUSTOMER BENEFITS AT LOWER UNIT COST THAN WILL THE CACS PROGRAM. COMPANIES WITH EXISTING PROGRAMS REPORTED A VERY HIGH CUSTOMER RESPONSE RATE, PRESUMABLY FROM DESIGNING AND IMPLEMENTING A PROGRAM TO SERVE THE SPECIAL CHARACTERISTICS OF THEIR CUSTOMERS. BY COMPARISON, THESE COMPANIES ANTICIPATED A LOW RESPONSE RATE TO THE CACS PROGRAM. THE AVERAGE ANNUAL PARTICIPATION RATE IN EXISTING PROGRAMS IS 9 PERCENT FOR SMALL COMMERCIAL CUSTOMERS AND 13 PERCENT FOR LARGE COMMERCIAL CUSTOMERS. BY WAY OF CONTRAST, THE ANTICIPATED ANNUAL RESPONSE RATE FOR THE COMMERCIAL AND APARTMENT PARTS OF THE CACS PROGRAM IS 2 PERCENT.

THESE COMPANIES BELIEVE THERE WILL BE LITTLE ADDITIONAL RESPONSE RESULTING FROM IMPLEMENTATION OF THE CACS PROGRAM. THE DIFFERENCE IN RESPONSE RATES BETWEEN EXISTING PROGRAMS AND THE CACS PROGRAM COULD BE EXPLAINED BY THE FACT THAT EXISTING PROGRAMS ARE DESIGNED FOR SPECIFIC CUSTOMERS, AND BOTH THE CUSTOMER AND THE UTILITY CAN BENEFIT. FOR EXAMPLE, IT WOULD BE INAPPROPRIATE IN NEW MEXICO TO EMPHASIZE THE BENEFITS OF HEAT-THERMAL STORAGE, AS REQUIRED BY THE CACS PROGRAM, WHEN AIR CONDITIONING AND LIGHTING ARE THE MAJOR END-USES. I RECOGNIZE, OF COURSE, THAT IN OTHER PARTS OF THE COUNTRY OTHER MEASURES WOULD BE APPROPRIATE.

I WOULD POINT OUT THAT THERE IS NO ASSURANCE THAT A COMMERCIAL CUSTOMER WILL INSTALL ENERGY-EFFICIENT MEASURES RECOMMENDED BY THE AUDIT. THE DECISION TO TAKE SOME ACTION IS

LIKELY TO BE BASED ON MORE COMPLEX CONSIDERATIONS THAN DECISIONS OF RESIDENTIAL CUSTOMERS. A SMALL BUSINESS OWNER WILL WEIGH THE TRADE-OFF OF ENERGY SAVINGS VERSUS COMFORT AND INVESTMENT COSTS. HOWEVER, FIRST THE BUSINESS OWNER MUST BE CONCERNED WITH PRODUCTIVITY AND PROFITABILITY. THEREFORE, A POTENTIAL ENERGY CONSERVATION INVESTMENT MUST ALSO COMPETE WITH OTHER, MORE DIRECT INVESTMENT OPPORTUNITIES ON A RETURN-ON-INVESTMENT BASIS. ACCORDINGLY, ONLY A SMALL FRACTION OF ELIGIBLE COMMERCIAL CUSTOMERS CAN BE EXPECTED TO TAKE ADVANTAGE OF AN ENERGY AUDIT WHERE PAYBACKS ON PROGRAMS CAN TAKE AS LONG AS SEVEN YEARS.

OVER 80 PERCENT OF THE SURVEY RESPONDENTS INDICATED THAT EXISTING PROGRAMS OR MODIFIED COMMERCIAL AUDIT PROGRAMS BASED ON LOCAL CHARACTERISTICS WOULD BE MORE BENEFICIAL TO THE CUSTOMER THAN THE FEDERALLY MANDATED CACS PROGRAM. IF S. 410 WERE ENACTED INTO LAW AS PROPOSED, ONLY 20 PERCENT OF THE RESPONDING COMPANIES WOULD OFFER THE CACS PROGRAM. THE VAST MAJORITY OF THOSE RESPONDING EITHER WOULD CONTINUE THEIR EXISTING PROGRAMS OR WOULD MODIFY THE CACS PROGRAM TO BETTER FIT THEIR CUSTOMERS' NEEDS AND WANTS.

I WANT TO EMPHASIZE AT THIS POINT THAT THERE WERE NO SURPRISES IN THE SURVEY RESULTS. THEY JUST CONFIRMED THE INDUSTRY'S PREVIOUS STATEMENTS THAT THE CACS PROGRAM IMPOSES UNNECESSARY REGULATORY BURDENS. THE INDUSTRY WILL CONTINUE TO PROVIDE PROGRAMS FOR BOTH RESIDENTIAL AND COMMERCIAL CUSTOMERS SO THEY CAN REDUCE THEIR ENERGY COSTS AND IMPROVE THEIR OVERALL ENERGY EFFECTIVENESS REGARDLESS OF WHETHER THERE IS A FEDERALLY MANDATED PROGRAM.

It is important that S. 410 or other repeal legislation be enacted as soon as possible in order to avoid the incurrence of costs associated with the start-up of the program. According to the survey, only 18 percent of the responding companies anticipate offering the CACS program prior to June 30, 1985. The other 82 percent do not anticipate offering the program before that date because state plans have not been approved or, where state plans have been approved, a later start-up date has been set.

Start-up costs for the CACS program are anticipated to be just under $11 million for the investor-owned sector of the electric utility industry. Of these costs, only $4 million will be spent prior to June 30, 1985. Thus, as much as $7 million could be saved if Congress acts quickly.

On the topic of costs, the survey indicated that the cost of conducting a CACS audit is anticipated to be $240 for a commercial customer and just over $200 for a multi-family customer. At my company, we estimate the cost for the audit to be between $500 and $600. In contrast, the EEI survey showed that nationally customers will be charged an average of about $100 for a commercial audit and $45 for a multi-family audit.

The total costs for the CACS program are estimated at $35.5 million per year. Thus, it is clear that utility stockholders and customers who choose not to participate in the audit program will subsidize the program by an estimated $20.5 million each year. It is EEI's position that this expenditure is unwarranted

IN LIGHT OF THE LACK OF COST-EFFECTIVE ENERGY CONSERVATION EXPECTED TO RESULT FROM THE CACS PROGRAM.

ALTHOUGH THE RCS PROGRAM IS NOT THE SUBJECT OF THIS HEARING, I WOULD LIKE TO RELATE MY COMPANY'S EXPERIENCE WITH IT, AND THEN MENTION THE RESULTS OF THE RCS SURVEY CONDUCTED BY EEI.

TNP HAS, THUS FAR, SPENT $390.07 FOR EACH RCS AUDIT. APPROXIMATELY 0.6 OF 1 PERCENT OF OUR CUSTOMERS HAD AN AUDIT. SINCE WE SERVE PRIMARILY SMALL COMMUNITIES, ONE MIGHT THINK THE RURAL NATURE OF OUR SERVICE TERRITORY ACCOUNTED FOR THE LOW RESPONSE. STATE-WIDE FIGURES THROUGH MARCH 31, 1985, THE LATEST AVAILABLE, INDICATE A RESPONSE RATE OF LESS THAN 2 PERCENT FOR ALL TEXAS UTILITIES. DALLAS POWER & LIGHT, PROBABLY THE MOST URBAN COMPANY IN TEXAS, HAD A RESPONSE RATE OF LESS THAN 1.5 PERCENT. CONSEQUENTLY, ALL COMPANIES IN TEXAS AND NEW MEXICO HAVE EXPERIENCED LOW CUSTOMER INTEREST AND A HIGH COST PER AUDIT.

EVEN MORE DISTURBING TO ME IS WHAT WE FOUND IN FOLLOWING UP TO SEE WHAT ACTION OUR CUSTOMERS TOOK IN RESPONSE TO OUR RECOMMENDATIONS. NOT ONE CUSTOMER HAD IMPLEMENTED THE TOTAL PACKAGE OF PROGRAMS THAT WE RECOMMENDED AS BEING COST-BENEFIT JUSTIFIED.

IT IS OUR BELIEF THAT THE CACS PROGRAM WILL HAVE SIMILAR RESULTS.

NATIONALLY, THE EEI SURVEY FOUND THAT 93 PERCENT OF THE COMPANIES THAT RESPONDED WILL CONTINUE SOME TYPE OF RESIDENTIAL CONSERVATION PROGRAM REGARDLESS OF THE INTERPRETATION OF THE RCS PROGRAM TERMINATION DATE. SOME ARE REQUIRED TO DO SO, EITHER BY STATE LAW OR REGULATION. SOME WILL VOLUNTARILY CONTINUE THE RCS

PROGRAM AND OTHERS WILL CONTINUE IT BUT IN A SLIGHTLY MODIFIED FORM. STILL OTHER COMPANIES WILL SUBSTITUTE THEIR OWN PROGRAMS. COMPANIES PLANNING TO OFFER A MODIFIED RCS PROGRAM WILL CHANGE THE PROGRAM ANNOUNCEMENT PROCESSES AND SOME OF THE PROGRAM MEASURES.

THE PRIMARY REASON COMPANIES WOULD SWITCH TO ANOTHER RESIDENTIAL AUDIT PROGRAM CAN BE STATED IN ONE WORD--COST. COMPANIES THAT WILL SUBSTITUTE A DIFFERENT RESIDENTIAL AUDIT PROGRAM FOR RCS INDICATED THAT THE AVERAGE COST PER RCS AUDIT IS JUST UNDER $300. IN COMPARISON, A PREVIOUS SURVEY INDICATED THAT INDUSTRY-WIDE THE AVERAGE COST PER AUDIT FOR COMPANY-DESIGNED PROGRAMS IS ABOUT $120.

IV. CONCLUSION

MY COMPANY, ALONG WITH OTHER EEI MEMBERS, HAVE FULFILLED THE RCS PROGRAM REQUIREMENTS FOR FOUR YEARS. OUR EXPERIENCE SHOWS THAT A FEDERALLY MANDATED AUDIT PROGRAM IS NOT THE MOST COST-EFFECTIVE MEANS TO ACHIEVE ENERGY CONSERVATION, AND THAT UTILITY-DESIGNED AUDITS ARE CLEARLY PREFERABLE. BASED ON THE LESSONS AND HISTORY OF THE RCS PROGRAM, CONGRESS SHOULD PASS S. 410 AS INTRODUCED, THEREBY REMOVING THE FEDERALLY MANDATED CACS PROGRAM THAT REQUIRES UTILITIES, SHAREHOLDERS, AND THEIR CUSTOMERS TO SPEND SUBSTANTIAL SUMS OF MONEY ON A PROGRAM THAT WILL NOT BE COST-EFFECTIVE.

BECAUSE CONGRESS IS INTERESTED IN ENHANCING COST-EFFECTIVE ENERGY CONSERVATION, IT SHOULD ENCOURAGE THE CURRENT REVITALIZATION OF MARKETING PRINCIPLES IN THE INDUSTRY. THE ONLY WAY THAT THIS INDUSTRY CAN PROSPER IS TO DEVELOP A PRODUCTIVE WORKING RELATIONSHIP WITH OUR CUSTOMERS. IN CONCLUSION, I HOPE THAT CONGRESS WILL SEE FIT TO REMOVE THIS REGULATORY BURDEN AND LET US GET ON WITH THE BUSINESS AT HAND--PROVIDING ELECTRIC ENERGY IN COMBINATION WITH COST-EFFECTIVE ENERGY EFFICIENCY AND CONSERVATION PROGRAMS.

Senator JOHNSTON. Thank you, Mr. Davie.
Mr. Hall.

STATEMENT OF NEAL HALL, VICE PRESIDENT, COMMUNITY RELATIONS, LONE STAR GAS CO., ON BEHALF OF THE AMERICAN GAS ASSOCIATION, ACCOMPANIED BY JANNETTE MOSER

Mr. HALL. Mr. Chairman, I am Neal Hall, vice president, Lone Star Gas Co. We are a natural gas utility serving 588 cities and towns in Texas and Oklahoma. I am presenting testimony on behalf of the American Gas Association, the AGA, in support of Senate bill S. 410. I am accompanied, as you noted, by Jannette Moser, Lone Star's manager of Community Services. Before being a manager, she was an auditor and is an expert. She has personally performed over 900 audits in customers' homes.

Lone Star's testimony is entirely consistent with that of the AGA. I speak for the AGA as a representative of a member company with a long history of direct involvement in energy conservation programs. AGA is a national trade association comprised of nearly 300 natural gas distribution and transmission companies serving more than 160 million customers in all 50 States.

AGA distribution companies must comply with regulations implementing both CACS and the RCS Program. AGA supports repeal of both RCS and CACS Programs.

The six key points of AGA's testimony in support of S. 410 are, point one, conservation is occurring without CACS. For many years, gas utilities have had effective conservation programs. Also, higher energy prices have caused customers to be more conscious of their energy use.

In response to this increased awareness, utilities developed additional conservation programs tailored to meet the needs of their customers. Many types of commercial conservation programs exist. Varied approaches are used, such as incentives for control and reduction of gas use, energy consultation services, introduction of heat recovery techniques and so forth and so forth.

But the result is a substantial reduction in nationwide gas consumption per commercial customer of 21 percent since 1973. This has occurred without the CACS Program.

Point 2, the CACS Program would interfere with the utilities' conservation initiative by preempting their ability to design and implement conservation programs to respond to customer needs peculiar to their service territories. Commercial use of natural gas does differ considerably from service area to service area at different parts of the country.

We respectfully believe that the most effective road for the Federal Government in promoting more conservation in this sector would be to encourage and support the successful efforts that the utilities have already initiated. Otherwise, utility managers would be preoccupied and utility resources heavily committed to fulfilling CACS Program requirements.

The gas utility industry has an excellent record in energy conservation which both predates and transcends Federal Government mandated programs. The CACS Program is not necessary to ensure that utilities will continue to assist their customers in conserving energy.

Point 3, participation levels are expected to be low. A recent survey of AGA utility members indicates the expected annual response rate for CACS audits of 2.05 percent for apartment buildings and 2.17 percent for commercial buildings. At Lone Star Gas Co. our forecast is 1-percent response rate for CACS.

Reasons for the expected low rate of customer participation in CACS include the experience with RCS Program, where there has been, nationwide with the gas utilities, a 3.3-percent response rate. Lone Star's response rate since the beginning is 2.4 percent. That's currently running at 0.82 percent. In Oklahoma, the response rate has been 0.59 percent for the first 2 years. The CACS Program, being modeled somewhat after RCS, we believe will yield similar but lower participation levels.

The second reason, there are few financial incentives which exist to encourage customers to participate in the CACS. Many small businesses lease space. Many lack the financial resources necessary to install significant conservation measures. Many apartment owners are absentee owners or are not responsible for paying utility bills.

Another reason is the ready availability—this was discussed at length in the previous panel—of engineering and consulting firms to perform this needed service. In Lone Star's service area in Texas, there are 350 such engineering firms available to perform these services. We would, of course, be competing with them under CACS.

Also, in our service area, Lone Star Gas Co.'s, there is a definite lack of demonstrated demand for commercial energy audits.

Point 4, the few commercial and apartment customers who might request an audit is also expected that a very small percent of these customers will follow through to install conservation measures. In 1982, AGA's survey indicated that less than 1 percent of customers audited under RCS later sought offered utility assistance in arranging the purchase, installation or financing of conservation measures. At Lone Star we found under RCS that most had already taken action before the audit.

And point 5, conservation benefits from CACS will not justify its higher cost. The available evidence suggests that CACS will result in little to no additional conservation in commercial and apartment buildings. The cost of the program to ratepayers for implementing the CACS will be high.

Startup costs per utility range up to $500,000. Operating costs for CACS would be higher than RCS because the diversity of buildings and businesses and equipment is staggering. Audits would take more time. Auditors would need more professional training.

The last point, point 6, it is the AGA position that other customers, non-CACS-eligible customers, including residential customers, should not have to subsidize a program for commercial and apartment buildings, especially a program expected to produce little or no actual conservation.

So, for the reasons stated, AGA urges the subcommittee to support S. 410, which would repeal the CACS Program.

Thank you for this opportunity to present our views.

[The prepared statement of Mr. Hall follows:]

TESTIMONY OF NEAL HALL
VICE PRESIDENT, COMMUNITY RELATIONS
LONE STAR GAS COMPANY
ON BEHALF OF
THE AMERICAN GAS ASSOCIATION
BEFORE THE
SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ON THE COMMERCIAL AND APARTMENT
CONSERVATION SERVICE PROGRAM

May 6, 1985

Mr. Chairman and Members of the Subcommittee:

The American Gas Association (A.G.A.) is pleased to present this testimony in support of Senate Bill S.410, which would repeal the Commercial and Apartment Conservation Service (CACS) program.

A.G.A. is a national trade association comprised of nearly 300 natural gas distribution and transmission companies serving more than 160 million consumers in all 50 states. Collectively, these companies account for nearly 85 percent of the nation's total annual gas utility sales.

A.G.A. distribution companies covered by the National Energy Conservation Policy Act of 1978 (NECPA),[1] as amended by the Energy Security Act of 1980 (ESA),[2] are affected by two different mandatory conservation programs. Such gas distributors must comply with the regulations implementing the CACS program and must also comply with regulations implementing the companion Residential Conservation Service (RCS) program.

---

[1] Pub. L. No. 95-619, 92 Stat. 3206 (codified at 42 U.S.C. §8201).

[2] Pub. L. No. 96-294, 94 Stat. 611 (codified at 42 U.S.C. §8211).

A.G.A. strongly supports the repeal of both the RCS and CACS programs. However, since S.410 is limited to the repeal of the CACS program, we will confine our testimony to the issue of CACS repeal.

Lone Star Gas Company, a division of ENSEARCH Corporation, is a public utility engaged in gathering, transmitting and distributing natural gas to approximately 110,000 commercial customers in Texas and 4,700 commercial customers in Oklahoma. Lone Star is a member of A.G.A. We are a "covered utility" as that term is defined by NECPA and will be required to provide services to our commercial customers under the CACS program. Based on the energy consumption criterion for natural gas use, over 90 percent of our 115,000 commercial customers will be eligible for the CACS.

A.G.A. has a real concern about the impact the CACS program will have on our customers of all classes who ultimately will have to pay higher utility bills to support CACS. A.G.A. supports the repeal of CACS for the following reasons:

o First, energy conservation has already occurred without the CACS program.

o Second, the CACS program itself does little to enhance the basic trends toward energy conservation -- because CACS participation rates, like RCS participation rates, are expected to be low.

o Third, the very marginal increment of energy conservation that the CACS program may induce is simply too small to justify the program's costs.

We shall briefly discuss each of these points in turn.

A. Conservation Has Occurred Without CACS

Over the last 10 to 15 years, a significant amount of conservation has occurred without government intervention. Higher energy prices have caused utility customers to be more conscious of their energy use. In response to increased customer awareness, utilities have developed conservation programs which are specifically tailored to meet the needs of their customers. As a result of increased customer awareness of the importance of conservation and, to some degree, utility conservation programs, a substantial amount of conservation has occurred since 1973. In a 1983 survey of A.G.A. member utilities, which analyzed gas consumption in the commercial sector, A.G.A. found that the nationwide gas consumption per commercial customer has declined by 21 percent since 1973. (See Exhibit A) Thus, over the last 12 years, the commercial sector of the economy has achieved significant energy savings without the benefits of the CACS program.

Although most utility conservation programs focus on residential conservation, many utilities have developed programs designed to achieve significant energy savings in commercial and apartment buildings. For example, one utility which has a large urban service territory offers several different conservation programs to meet the needs of commercial gas users. This utility's commercial conservation program includes a commercial energy audit program that encourages customers to implement innovative maintenence and operation procedures and to install energy efficient equipment. The audit program also offers financial incentives for the installation of devices which control, reduce and monitor natural gas use. Still another program promotes the use of heat recovery techniques to resolve problems of energy waste. Another utility that serves a large metropolitan area conducts a multifamily building energy audit program for its apartment building customers. Utility-developed programs such as these offer the potential for substantial energy savings for the customers that participate.

Thus, if the Federal Government is interested in promoting more energy conservation in commercial and apartment buildings, the most effective approach is to encourage and support the efforts that the utilities have already initiated. The CACS program interferes with utilities' conservation initiatives by preempting their ability to design conservation programs that are responsive to the particular needs of customers in their individual service territories. For example, the number and types of commercial and apartment buildings in a large northern city differ substantially from the number and types of commercial and apartment buildings in a rural area of the South. Indeed, in an informal survey of A.G.A. member utilities conducted earlier this year, one utility located in the South indicated that it had virtually no apartment buildings in its service territory. Yet, under the CACS program, this utility, along with all other covered utilities, would be required by law to incur the costs necessary to develop an apartment building audit program. Simply stated, utility managers would be preoccupied with fulfilling CACS program requirements rather than providing their own conservation programs that are actually designed to meet the needs of their customers.[3]

We believe that the gas utility industry has an excellent record in energy conservation and has demonstrated an interest in energy conservation which both pre-dates and transcends Federal Government mandated programs. The CACS program simply is not necessary to ensure that utilities will continue to assist their commercial customers in conserving energy.

---

[3] In designing a CACS audit program, utilities must be very conscious of the Federal and State requirements. Utilities that fail to comply with CACS program requirements are subject to civil penalties under NECPA. See 42 U.S.C. §§8214(c), 8220(c), (d).

B. Participation Levels for CACS are Expected to be Low

Gas utilities have indicated that the percentage of CACS-eligible commercial and apartment buildings for which audits will be requested is expected to be very low. As mentioned, A.G.A. conducted an informal survey of 44 A.G.A. member utilities earlier this year which sought to determine our members' expectations on the cost and participation levels in the CACS program.[4] The survey data indicates that, through the year 1990, gas utilities are anticipating that the average annual response rate for CACS audits will be 2.05 percent for apartment buildings and 2.17 percent for commercial buildings.

There are several reasons for expecting a low rate of customer participation in CACS. First, utilities have already experienced a low rate of customer participation in the established RCS program. One study of RCS has shown that, after 2 years, the aggregate response rate for RCS audits nationwide was only 3.3 percent of all eligible customers.[5]

---

[4] The survey sample included both large and small gas utilities located in 37 states and representing all regions of the country.

[5] Centaur Associates, Inc., 1983 RCS Highlights: Cost-Benefit Evaluation of the Residential Conservation Service Program 18 (1983).

Lone Star's response rate for RCS audits has been substantially lower. In Oklahoma, Lone Star's response rate for the first two years of RCS was only .59 percent. In Texas, the RCS audit response rate declined from 3.18 percent after the first round of of RCS program announcements to .82 percent after the second round. Because the CACS program was explicitly modeled after the RCS program, it will probably yield similar participation levels.

Second, few financial incentives exist which would encourage customers to participate in CACS. In the commercial sector, many small businesses lease space. In the absence of either a long-term lease agreement or tremendous growth prospects, small business establishments lack both the incentive and the financial resources necessary to install significant conservation measures in buildings that they do not own. Moreover, the owners of commercial buildings and of many apartment buildings lack incentives to install conservation measures because they are often absentee owners or are not responsible for paying utility bills.

Notwithstanding the number of audits expected to be requested under CACS, the actual rate for installing conservation measures in commercial and apartment buildings inevitably will be even lower than the audit participation rate. Obviously, every customer who has a CACS audit conducted will not install conservation measures.

In 1982, a survey of A.G.A. member companies which solicited data on the RCS program, indicated that less than 1 percent of the customers audited later sought utility assistance in arranging the purchase, installation or financing of conservation measures.[6] Since the percentage of commercial and apartment buildings for which CACS audits will be requested is expected to low, the percentage of buildings in which conservation measures will actually be installed would be significantly lower.

C. The Cost for Implementing CACS Will be Comparably High

The cost of the CACS program may not be fully appreciated by those who view CACS as a logical extension of the RCS program. The crux of the issue evolves from the nature of the commercial marketplace. Based on the consumption criterion for natural gas which requires that the average monthly consumption during the past twelve months must not exceed 100 Mcf per month, the customers eligible for CACS represent a diversity of businesses, buildings, and equipment that is staggering, not only within a particular utility's service area, but regionally as well. Many types of enterprises, even more building types, and potentially hundreds of equipment configurations would have to be considered in planning for the design and implementation of the CACS program.

---

[6] Hearings on the Residential Conservation Service Program and the Commercial and Apartment Conservation Service Program Before the House Subcomm. on Energy Conservation and Power, 98th Cong., 1st Sess. (1983) (Statement of George H. Lawrence).

In addition, many utility customers are served by separate gas and electric companies and may even have another fuel source. These customers will be required to subsidize the CACS programs of more that one utility. These costs will be paid not only by commercial customers who choose not to use CACS, but also by non-commercial customers who are not even eligible for CACS.

E. Conservation Benefits From CACS Will Not Justify Its Cost

The available evidence strongly suggests that CACS will result in little or no additional conservation in commercial and apartment buildings. Nonetheless, the cost to utility ratepayers for implementing CACS will be comparably high. One utility, with a service territory which encompasses a large urban area, has estimated that its CACS start-up costs alone will be approximately $500,000. Operating expenses for CACS would also be higher than for RCS because of the vast array of commercial and apartment building types.

Many indigent residential ratepayers are already having difficulty paying their utility bills. These customers, as well as all other customers who are not eligible for CACS, should not have to subsidize a program for commercial and apartment buildings which is expected to produce little or no actual conservation. Simply stated, the utility ratepayers will pay a comparably high price for a program that will not result in significant conservation.

F. RCS Should Also Be Repealed

Although the subject of this hearing is CACS repeal, we nonetheless reiterate our support for the repeal of the RCS program. A significant amount of energy conservation occurred prior to the implementation of RCS. Moreover, the RCS program is not cost-effective. RCS benefits primarily middle- and upper- income participants at the expense of the poor and the elderly who must subsidize the program through their utility bills. We therefore do not believe that RCS is necessary to spur additional conservation efforts by consumers.

G. Conclusion

For the reasons stated above, we urge this Subcommittee to support S.410, which would repeal the CACS program. We also urge the repeal of the RCS program. Thank you for this opportunity to present our views.

VIII. CONSERVATION

Due to the ongoing interest in the impacts of conservation on gas demand, the 1983 survey participants were asked to provide an estimate of the conservation that has occurred in their service areas over the last decade. Conservation was defined as the percentage variation in 1983 consumption per commercial customer from the 1973 baseline level, with consumption normalized for weather. Respondents composing a sample size of 36% were able to provide this information. Within each region, the level of conservation was calculated as a sales-weighted average of the percentage estimates made by each company. The national average level of conservation was, in turn, calculated as a sales-weighted average of the regional conservation levels. As shown in Table 18, their responses indicated that national average consumption per commercial customer has fallen 21% since 1973. The conservation estimates range from a low of 14% in the South to 28% in the West.

- EXHIBIT A

Table 18
CONSERVATION

Region	Level Of Conservation[1,2]	Sample Size
United States	21%	36%
Northeast	15	30
North Central	25	39
South	14	44
West	28	24

---

[1] Defined as the precentage variation in 1983 consumption per customer from the 1973 baseline level (normalized for weather). All entries represent a decrease in consumption per customer.

[2] Level of conservation in each region calculated as a sales-weighted average of conservation reported by each company. U.S. level of conservation calculated as a sales-weighted average of conservation in each region.

ENERGY REGULATION AND CONSERVATION SUBCOMMITTEE

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

UNITED STATES SENATE

WASHINGTON, D.C.

In the Matter Of:

Senate Bill S.410 to Repeal the)
Commercial and Apartment Conservation)
Service (CACS) Program)

WRITTEN COMMENTS OF

LONE STAR GAS COMPANY
DIVISION OF ENSERCH CORPORATION
DALLAS, TEXAS
MAY 6, 1985

SUMMARY

LONE STAR GAS COMPANY COMMENTS

Anticipated Response and Effectiveness of the Commercial and Apartment Conservation Service (CACS) Program

1. Commercial and non-commercial customers will be subsidizing this Program for businesses which have a free-market mechanism for recovering costs.

2. Regulators, and most assuredly non-business customers, will strongly resent all customers being mandated to pay for a service that will benefit only a few.

3. The implementation of this service by utilities may generate unfair competition for those who are currently providing this service and who would aggressively pursue this market if there were sufficient demand.

4. The Program will be costly to implement because of the variety of businesses, buildings and energy equipment that utilities must be prepared to audit. The qualifications and technical expertise needed by personnel to perform commercial energy audits may require highly trained, specialized professionals, further increasing Program costs.

5. There is a lack of demonstrated demand for CACS-type services among commercial customers.

6. The CACS energy audit offers limited conservation information to commercial businesses who lack adequate capital resources, to businesses that lease rather than own their properties and to absentee investors who have little interest in retrofitting apartments where tenants pay utility bills.

BACKGROUND AND GENERAL INTRODUCTION

Lone Star Gas Company, a division of ENSERCH Corporation, Dallas, Texas, provides natural gas utility services to portions of Texas and Oklahoma. We are pleased to provide this testimony regarding the anticipated performance and effectiveness of the Commercial and Apartment Conservation Service (CACS) Program.

Lone Star Gas Company is a public utility engaged in gathering, transmitting and distributing natural gas to approximately 110,000 commercial customers in Texas and 4,700 commercial customers in Oklahoma. We are a "covered utility" as that term is defined in the National Energy Conservation Policy Act of 1978 (NECPA), as amended by the Energy Security Act of 1980 (ESA), and will be required to provide services to our commercial customers under the CACS Program. We also serve some 1,070,000 residential customers and approximately 1,730 industrial and other types of customers in Texas. In Oklahoma, we have approximately 33,200 residential customers and some 53 industrial customers. Those customers are located in 588 cities and towns in a service area that encompasses 250,000 square miles. Based on the energy consumption criterion for use of natural gas, over 90% of our 115,000 commercial customers will be eligible for the service. We at Lone Star Gas have a real concern about the impact the CACS Program will have on our customers of all classes who will ultimately have to pay higher utility bills to support this service.

Lone Star Gas has extensive experience conducting energy audits because of participation in the federally mandated Residential Conservation Service (RCS) Program in both Texas and Oklahoma. We began offering RCS audits to our residential customers in Oklahoma in September 1981. Our response rate for round one was .43% and the response for round two has thus far been .75%. The overall response rate has been .59% in Oklahoma. To date, we have performed 307 audits and have cancelled 199 audits at the request of the customer. RCS audits were first offered to our residential customers in Texas in April 1982 with a 3.18% response for round one. Thus far, response to round two has been .82%. The total number of audit requests in Texas to date has been 41,386. As of April 1985, we have performed 27,115 audits and have cancelled 11,433 audits at the request of the customer. The RCS Program has not been popular with our customers, as reflected in the low response rate and in the volume of telephone calls and letters we have received from angry customers. We are quite certain the CACS Program will have a similarly poor response from eligible customers. We also believe the federal requirement that information costs of the Program be shared by all ratepayers will be even more resented than the RCS cost-sharing has been.

Lone Star Gas Company has,,historically, kept abreast of the needs of its customers and has worked diligently to meet the energy management needs of its commercial customers. We believe our familiarity with the National Energy Conservation Policy Act, the Energy Security Act, the concept-similar RCS Program and, most importantly, our familiarity with the commercial marketplace, qualifies us to offer an informed appraisal of the likely effectiveness of CACS. To that end, we offer the following overall comments with regard to the CACS Program.

SPECIFIC COMMENTS ON CACS:

1. One of our primary concerns, as previously stated, is the negative impact the CACS Program will have on our customers of all classes who will ultimately have to pay higher utility bills to support the service. In many situations, customers have both gas and electric service and may even have another fuel source. They will be subsidizing the CACS Programs of more than one utility. These costs will be paid by not only commercial customers who choose not to use the service, but also commercial and non-commercial customers who are not even eligible for the service.

Both the Oklahoma CACS State Plan and the Texas CACS State Plan have been resubmitted to the Department of Energy (DOE) for approval. NECPA requires that the informational and promotional costs of the

Program be shared by all ratepayers. Additional costs incurred in providing this service can be charged directly to the customer receiving the commercial energy audit or can be shared by all ratepayers.

The Oklahoma CACS State Plan requires a direct charge of $100 to the participating commercial customer. The Texas CACS State Plan allows a direct charge of up to $350 but not to exceed the actual cost of the audit. Expenses in excess of those recovered from the commercial customers are to be recovered from all ratepayers.

2. In Oklahoma, Lone Star is regulated by a single regulatory agency, the Oklahoma Corporation Commission. However, Texas is a "home rule state" and, as such, our regulators are the local city councils in the 424 Texas cities and towns we serve. The Railroad Commission of Texas has authority in the unincorporated areas. Those regulators have made it very clear they feel their constituents will strenuously object to bearing the cost of a program designed to serve profit-making enterprises. In market research studies conducted for Lone Star Gas, some 85% of our city council members said people in their towns would "not be at all supportive of federal energy programs if they knew that their utility bill might have to be higher in order to pay for the programs". Our Texas consumers, when asked the issue directly, were every bit as clear in their opposition to the concept of subsidization. Almost 70% said businesses and apartment owners should pay for the entire cost of the CACS audit. Commercial customers and apartment owners have a free-market mechanism for recovering their costs and, yet, customers of all classes will share the burden of this Program.

3. By recent count, there are more than 350 consulting engineers in our Texas service area. This number does not include our Oklahoma service area or cities such as Austin, Texas or Oklahoma City, Oklahoma, immediately adjacent to our service area. The consulting engineers are involved in organizations that are established, staffed and knowledgeable in commercial energy use. We are

confident quite a number would want to provide a commercial energy audit service if a demonstrated demand were present. In fact, the National Association of Consulting Engineers testified before the Energy Conservation and Power Subcommittee of the U.S. House of Representatives in September 1983 that they support repeal of CACS because they believe their members are better prepared to meet the needs of commercial businesses.

4. The CACS Program will be a very costly service; costs that may not be fully appreciated by those who view it as a logical extension of the RCS Program. The crux of the issue evolves from the nature of the commercial marketplace. Lone Star serves approximately 115,000 commercial customers in Texas and Oklahoma. Based on the consumption criterion for natural gas (the average monthly consumption during the past twelve months must not exceed 100 Mcf per month), an estimated 104,000 customers will be eligible for the service. Those customers represent a diversity of businesses, buildings and equipment that is staggering. Many types of enterprises, even more building types, and potentially hundreds of equipment configurations must be taken into consideration and planned for in the design and implementation of the CACS Program.

Because of the complexity of the CACS Program audit, the qualifications of the auditors to conduct CACS audits may require highly trained, specialized professionals. Depending upon the level of technical expertise specified in the individual State Plans and, subsequently, upon final approval by DOE, the auditor qualifications may require an engineer or a fully trained "engineer equivalent" to perform the CACS audits and give the level of detail and analysis dictated by these requirements. If utilities are required to hire personnel with this educational background and expertise, the start-up and on-going costs of the Program will be even higher.

Since the inception of the RCS Program by Lone Star Gas in 1981, the cost to our ratepayers has been $3,639,778. To date, only 27,422 (2.48%) of Lone Star's more than 1.1 million residential customers have been interested enough in the RCS audit to have one performed at their homes. The average cost per audit, systemwide, is $133. Evidence exists which clearly indicates RCS audits have not resulted in producing material energy reduction. Recent analysis supports that conclusion: audited customers use only 2.2% or 1.7 Mcf less gas than non-audited customers and even that savings has not been demonstrated to be completely attributable to the RCS audit.

Lone Star Gas firmly believes the RCS Program has been a very expensive federal attempt at conservation and an unsuccessful and unpopular Program with our customers. The projected costs, response rate and customer attitude toward the CACS Program is almost certain to follow in the footsteps of RCS.

5. We are not aware of any current study that substantiates the demand among commercial customers for CACS. In our daily contacts with our commercial customers, one point is very clear: we have not been inundated with requests for an energy audit-type service. Lone Star has for many years provided a common sense, cost-effective energy utilization consultation service for commercial customers requesting help in this area. These requests throughout our service area annually number in the dozens, not hundreds or thousands. As a result, we are dubious about mounting an expensive, complex service that impacts the utility bills of all our customers in the absence of convincing evidence that our commercial customers demand this service from their natural gas utility. When considering the very low response from our residential customers in Texas and Oklahoma, it is very probable the response rate and audit performance rate for our commercial customers will be even lower.

6. Lone Star believes small businesses which most need assistance will have a very small response rate under the CACS Program, for two reasons. First, a majority of small, and even medium businesses, are generally unwilling to make investments in major, permanent improvements unless long-term leases and growth prospects exist. Second, many small businesses simply lack adequate resources necessary for costly improvements. An additional impediment to CACS effectiveness will be the ownership situation of apartment

structures. A major portion of large multifamily structures are owned by absentee investors who have, to date, exhibited little interest in the investment for energy-saving measures under circumstances where tenants pay the utilities. As a result of these factors, response to the CACS Program by those who most need the assistance will be small and subsidization of one segment of this market by another will exist as it does under RCS.

CONCLUSION

Lone Star Gas concludes that the Commercial and Apartment Conservation Service Program does not merit continuation. This conclusion is based on experience under the RCS Program and an understanding of the commercial sector in Lone Star's service area. This conclusion is consistent with Lone Star's belief that the Program can never be cost-effective and, as a consequence, will place an unnecessary cost burden on all Lone Star Gas customers. Lone Star Gas supports Senate Bill S.410, which would repeal the Commercial and Apartment Conservation Service Program.

Senator JOHNSTON. I thank you gentlemen for your excellent statements.

Mr. Hall, did you say what the cost of your RCS audits has been?

Mr. HALL. Total cost of the audits have been, of the RCS Program, has been approximately $3.7 million.

Senator JOHNSTON. What's the average cost, though, for Lone Star?

Mr. HALL. Average cost per audit in Texas has been $128. In Oklahoma, it's been $550 per audit.

Senator JOHNSTON. $150 on the average?

Mr. HALL. $550 in Oklahoma, $128 in Texas.

Senator JOHNSTON. Why the vast difference?

Mr. HALL. It's the geography, sir. We serve about the southern one-fourth of Oklahoma, which is spread from Broken Bow and Idabel on the east side to Hollis on the west side, and it's a matter of the cost of setting up the program and training the auditors, and the rather low response rate that we've had there, in other words, cost versus audits. It divides out at $550.

Senator JOHNSTON. Mr. Davie, your cost was $390. Why is that so much higher than the average in Texas?

Mr. DAVIE. Well, I don't know that that's much higher than the average in Texas. It is a little bit. It's higher than the national average. But again our company is primarily a small company and we serve mostly rural areas of Texas and the southwestern area of New Mexico. That has certainly had some impact upon our cost per audit.

Also, for some reason we had a very low response rate, lower than most companies on the national level. Of course, that increased our cost per audit because of that.

Senator JOHNSTON. You feel convinced that the CACS audit would actually cost more than the law allows?

Mr. DAVIE. Oh, very definitely. We know our startup costs, just getting prepared, assuming we had the same response rate, would run in the neighborhood of $400 to $500, not even including the direct labor that it would cost to do the audit itself.

Senator JOHNSTON. Gentlemen, on the previous panel there was concern about the possibility of anticompetitive actions by utilities were we to repeal CACS and that we should leave in effect some either transition rule or some authority of the State PUC's to continue in operation their rules with respect to anticompetition.

Would you like to comment on that?

Mr. DAVIE. My company does not participate in any kind of program that would be anticompetitive to the panel members, as they testified, so I don't feel qualified to make a response to that, because we are not involved in that kind of business.

Senator JOHNSTON. Mr. Hall?

Mr. HALL. Before RCS, we were involved in our conservation programs in which an extensive educational program, some of it technical in nature and some of it general in nature, that part directed to the general public. Without RCS, we would certainly return to that type of program, which we believe to be more effective.

I see no problem with the independent contractors with this kind of a program. It would tend to provide a very effective umbrella under which they should be able to get a lot more business, to the benefit of their customers.

Senator JOHNSTON. Well, I'd like to invite EEI and AGA to respond to that more fully, if you would care to.

Mr. DAVIE. Senator, we will. We discussed this a little bit last evening prior to my testimony, and, of course, it is our position that a utility should have the right to participate in whatever business they want to, as long as the other ratepayers are not subsidizing that particular program.

But we will respond to it more fully.

Senator JOHNSTON. Well, if that's your response, it will be fine. But I would like to get it on the record as to whether there is a concern and also your opinion on the law with respect to that.

Mr. HALL. We will respond, sir.

Senator JOHNSTON. Now, gentlemen, I'm going to have to go to a luncheon. I'm going to let Senator Ford finish up. He may keep you here a long time.

Senator FORD [presiding]. Well, I want to tell you, Old Ironbucket's still here. [Laughter.]

I have a little bit of a feeling that those who are concerned about the competitive problem was the ads that were left attached to Mr. Reckinger's statement as to the gas companies, Indiana Gas—most of it's Indiana Gas, I guess, that they're talking about; at least they have the ads here—where you can just put it on your gas bill, a few things like that. I don't know whether that's it or not.

Or that must have come from Mr. Norton, Mr. Norton, American Supply Association. That was basically out of his statement, I'm sorry. But there's a thread, and I won't keep you about 5 minutes and then we'll quit, the cost effectiveness of an audit.

The Texas commissioner said this morning that whatever you could reduce as it related to the use of the energy source, and I guess he was talking basically about generation of electricity, would reduce the need for construction of a new unit, and by reducing that need you ultimately save the customers. Yet we heard testimony that as you reduce the use, it increased the cost to the individual customer because you are not getting into that category. And I'm not sure how many residential problems we'd run into as it relates to the reduction of the cost to increase—the reduction of the use to increase the cost.

Is there a long-term benefit to reducing whatever use of energy source that we might be able to do? Is there a long-term benefit to reducing the need for the construction of a new utility? You all would use gas-fired and be interested in that. My State hopefully would be interested in fossil use, and we get into all that. Some would use oil, maybe.

But is there a long-term benefit, either one that wants to answer that would be fine, as it relates to the consumption of the product?

Mr. HALL. Well, as you have observed, Senator, the high investments, like in new generating plants, doesn't apply to the gas utility business in the same way. Mostly ours is a function of buying gas and selling gas. However, yes, there is a long-term benefit, in our opinion, in having programs to use our energy more efficiently, to conserve energy, as we can, but to do this in an efficient way.

We ran a study, incidentally, of customers who had had RCS audits and studied their energy use for a year after the audit and compared it with the year before, and then we took the cost of the RCS Program and were able to determine that there was a 2.2-percent reduction in energy use by those customers who had had the RCS audit. That doesn't mean that the RCS audit provided all that 2.2 percent, because these are people who are probably more energy conscious to start with.

But when you apply the economics to that, the cost of the gas saved was on the order of $82 an mcf. So that's why we believe strongly at our company that the RCS approach and the CACS approach is not the best way to get at this very desirable goal.

Senator FORD. You also stated, Mr. Hall, that the residential was already in place and it was already going, RCS, you know, programs already in place without us putting it in, and it was already moving. Wasn't that basically the energy tax credit that encouraged residential users of energy, the savings that that began to reduce use because they got a tax credit, putting in storm windows, newer, deeper insulation and that sort of thing?

Mr. HALL. It's just a matter of opinion.

Senator FORD. That's your carrot and stick that you were talking about earlier, that there's nothing in this bill to create an incentive for someone to use.

Mr. HALL. I would agree that that had something to do with the response. But when—we did, through some independent research, analyzed the motives of the people who asked for and had RCS audits, and what we found was that for the most part these people had already taken their energy conservation actions. They were merely seeking, we would assume, some confirmation from us that what they had done was a pretty smart move.

But yes, I think the tax credit did favorably influence the response rate.

Mr. DAVIE. Senator, I would agree with that, but I would also add in our own particular case, and I think it would probably be more borne out on a national basis, that the price of electricity began escalating in the early 1970's, and that was probably the greatest incentive for people to begin doing things on a conservation measure than any act of Congress.

Senator FORD. That was a statement you heard me say. The economist said if it's a glut, it's underpriced, and if it's a shortage, it's overpriced—I mean. Yeah, if it's a glut, it's overpriced. If it's a glut, it's overpriced. If it's a shortage, it's underpriced.

Mr. DAVIE. Well, I would like to respond to your question that Mr. Hall answered regarding—there is, I think, an underlying desire to always conserve our energy as much as possible for future generations and for the fact that if we can conserve energy through our conservation programs and not use up these finite resources it would be advantageous to our Nation.

By the same token, I believe most of the programs, as I tried to speak in my testimony, that the utilities involved in conservation programs are designing programs that will benefit their unique characteristics. Our concern is that a national mandated program does not fit all of the particular characteristics of each of the individual companies.

As I stated, my company serves basically small towns and rural areas of Texas and New Mexico that has complete different characteristics of the urban companies, even in Texas or other parts of the country.

Senator **Ford**. Mr. Davie, I have seen two emotional periods in my lifetime. I'm 61 years old, shooting for 70, you know, right on. But that was World War II and in the 1970's. In-between that, there was no restraint or conservation. Everybody was moving hard, and right now you're building schools all over the country without windows, you know. So you have to have some—you have to have heating and cooling and if it goes out or they have some problem, they send the kids home, you know.

So we're into that posture and that design. That architectural fad was going on at that particular time. Now I see us losing that attitude as it relates to conservation, because we don't have any trouble getting gasoline, we don't have any trouble getting natural gas, we don't have any trouble with oil.

Well, our industry is down to about 80 percent of industrial capacity, so we're not using as much. You feel it. We've gone through the take-and-pay problem now, I guess. That may be behind us. We've made mistakes trying to get through a natural gas policy act. No one even knew at the panel a while ago that natural gas basically was deregulated excepting that which was on stream in 1977.

So not much interest until we have another shortage, and that shortage is evident only by the cars at service stations, and talking about gasoline going down instead of going up. It's gone up 8 cents in the last 14 days in this area, and gasoline's going up pretty good, and we're going to find another problem pretty soon in the distribution of petroleum products in this country by basically the Saudis and the Kuwaitis.

Gasoline's being shipped into the west coast. The Saudis' refinery is on line and all those good things. We're going to see lots of things happening and we're going to have to take a real hard look and maybe take some chances. I'm not sure.

You know, we all have that spirit in us somewhere that we're willing to take a chance and I'm not sure I'm willing to take a chance because I'm trying to make a decision at the Federal level that affects your private enterprise, and I respect that as much as any individual here, I think. But yet at some point the Natural Gas Policy Act helped the Nation as a whole, I think. At least I have that impression. That's the way I voted, to do that. That was my intent.

As they say, the streets of hell are paved with good intentions. But I hope that you understand where I'm coming from. I don't want to interfere with your business. There are a lot of problems and I have no crystal ball. I have no crystal ball, but I do see some things happening that it appears to me that lightning may strike twice.

Mr. **Hall**. Senator, if I could make one statement in that area, subject area, I think all of the educational effort that's gone on in the last few years has begun to do a lot of good in a lot of ways. I'll give you two examples.

Just a few years ago, the average new home in our area, you would typically still find a standard efficiency furnace. Just in the last 2 or 3 years, this has changed. You tend to find the efficient furnace there now. The builders are spending the extra money to get the top-of-the-line, more efficient furnace for their customer.

Only 3, 4 years ago, there were only about 2 percent of the water heaters shipped into the State of Texas were the energy efficient models, which are higher cost. Plumbers were not selling them. Plumbers today are able and are selling the energy efficient models.

Senator FORD. Well, they can advertise that this house is energy efficient, too, and that appeals.

I understand a little bit about promoting.

Mr. DAVIE. Well, Senator, our program that we have been implementing long before RCS came along was to try to educate the builders in building an energy efficient home which would cut the total energy consumption for the customers, and they have been very successful in marketing that to the individual customer.

Senator FORD. Well, I appreciate your patience with me and everybody this morning. I know more now than I did, because I asked more questions than anybody else, I think. Thank you all very much.

[Whereupon, at 12:40 p.m., the hearing was adjourned.]

APPENDIXES

Appendix I

Responses to Additional Committee Questions

Department of Energy
Washington, DC 20585

June 27, 1985

Honorable Don Nickles
Chairman, Subcommittee on Energy
  Regulation and Conservation
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

On May 6, 1985, Acting Assistant Secretary Donna Fitzpatrick appeared before the Energy and Natural Resources Subcommittee on Energy Regulation and Conservation to discuss S. 410, Commercial and Apartment Conservation Service (CACS) and Residential Conservation Service.

Following that hearing, you submitted written questions for our response to supplement the record. Enclosed for your information are the answers to those questions, which also have been sent directly to the Committee staff.

If you have any questions, please call Ingrid Nelson or Cathy Hamilton of my staff on 252-4277. They will be happy to assist you.

Sincerely,

Robert G. Rabben
Assistant General Counsel
for Legislation

Enclosures

POST-HEARING QUESTIONS AND ANSWERS

Relating to the

MAY 6, 1985, HEARING

before the

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

WITNESS: DONNA FITZPATRICK

QUESTIONS FROM SENATOR NICKLES

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS)

Question 1: Can you provide the Subcommittee with an estimate of the costs of the CACS program, its benefits and how these estimates compare with the costs and benefits of other energy conservation programs?

Answer: We estimate that at a three percent penetration rate the overall first year cost of the program, including Federal, state, utility, and consumer cost, is likely to be approximately $31 million per year, with an incremental savings attributable to the program of approximately $10 million. Even under what we consider to be very generous assumptions (5 percent penetration rate and 5 percent energy savings), we estimate that the savings resulting from the program would be approximately $30 million per year, nationally. These assumptions (5 percent/5 percent) are based upon our experience with the Residential Conservation Service (RCS) program, which had a penetration rate of 1.7 percent and energy savings of approximately 4 percent (4 million Btus) per participant.

By way of comparison, the Gas Furnace Pilot Light Program (GFPLP), sponsored by the California Public Utility Commission, provides an example of an effective conservation program which has been designed in light of local utility and utility customer characteristics. It is premised on the fact that about 80 percent of the State has warm summer weather where gas furnace pilot lights can be turned off for periods of 4 to 6 months. As of 1983, the program had reached 3.8 million utility customers (about an 80 percent participation rate). The program is estimated to result in a savings of approximately 3.2

million Btus per year per participant, or slightly less than the amount of incremental savings (4 million Btus) that we attribute to the Residential Conservation Service (RCS) program. However, the cost associated with producing these savings averages about thirty seven cents per participant, while the RCS program, with a penetration rate of less than 2 percent per year, has an incremental cost of about $350 per participant (including both administrative and retrofit costs). Thus, the savings attributable to the GFPLP had a cost of approximately 12 cents per million Btus, while those attributable to the RCS program cost approximately $88 per million Btus. In its first year of operation the GFPLP is estimated to have resulted in savings of 16 trillion Btus in California alone, while the RCS program is estimated to have saved approximately 12 trillion Btus in its first two years of operation, which covered 37 states, including California. As mentioned above, the CACS program is likely to cost about $31 million per year, with an energy savings of approximately 962,013 MBtus per year. Thus, the CACS program is likely to save less energy than the RCS program, while costing approximately $32 per million Btus, which is much less effective than other means of saving energy, such as GFPLP.

As another example, Southern California Edison offers free energy audits to commercial customers and then gives rebates to those investing in recommended hardware. Last year, the utility rebated $11 million to commercial and industrial customers, who invested more than $76 million in conservation equipment. While this program covers the service territory of only one utility, the CACS program is expected to result in about $3.6 million per year in incremental investment in conservation equipment nationwide, with an administrative and audit cost of doing so of about $26 million.

QUESTIONS FROM SENATOR NICKLES

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS)

Question:	What portion of the costs of CACS are start-up costs, that is, how much of the implementation investments have already been made, and how much can still be avoided if the program were repealed before the end of this session of Congress?
Answer:	The estimated State and utility start-up costs of CACS to date are approximately $3 million. $28 million in start-up costs would be avoided if the program were to be repealed immediately.

QUESTIONS FROM SENATOR NICKLES

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS)

Question: Please provide the Committee with a copy of the Department's Final (DOE CE-0051) Regulatory Impact Analysis of CACS.

Answer: A copy of the Department's Final Regulatory Impact Analysis of CACS is enclosed as requested. *

---

*Retained in Subcommittee files.

DOE/CE-0051

Final Regulatory Impact Analysis

Commercial and Apartment Conservation Service Program

July 1983

U.S. Department of Energy
Assistant Secretary,
Conservation and Renewable Energy
Office of Buildings Energy R&D

QUESTIONS FROM SENATOR NICKLES

Question: You have stated that you believe repeal of the CACS program would not affect the ability of the States to authorize similar State programs. Yet some State officials, such as Mr. McLogan, at the hearing, contend that without Federal authority for their program, existing State statutes would probably be struck down by court challenges. Would you please provide a legal analysis supporting your position, including any cases where this issue has been addressed?

Answer: DOE believes that repeal of the Commercial and Apartment Conservation Service (CACS) program, 42 U.S.C. §§8281 et seq., should not affect the ability of most, if not all, States to authorize public utilities to implement CACS-type programs.

Under the CACS legislation, State participation in the CACS program is entirely voluntary. Once a State plan is submitted and not subsequently withdrawn, however, the legislation requires detailed activity on the part of the participants. The primary element of the program is an on-site energy audit, which large electric and natural gas utilities offer to perform for customers who are owners or tenants of "small" commercial buildings and owners of apartment buildings with five or more units and a central heating or a central cooling system.

The energy audit must inform the eligible customer of at least --

(1) the type of, quantity, and rate of energy consumption of such building or dwelling; and

(2) energy efficiency improvements appropriate to such building or dwelling; and

(3) the need, if any, for the purchase and installation of commercial energy conservation measures in such building or dwelling. 42 U.S.C. §8281(b)(7).

The Tenth Amendment of the Constitution reserves to the States all powers not delegated to the United States or to the people. The State's police power is one of these retained powers. The Supreme Court has stated that "the police power of the State embraces regulations designed to promote the public convenience and general prosperity as well as regulations designed to promote the public health, the public morals, or the public safety." C.B. & Q.Railway v. Drainage Comm'ns. 200 U.S. 561, 592 (1906).

This broad and comprehensive power is limited by constraints placed upon it by the Constitution, Federal statutes, and treaties.

City of Birmingham v. Monk, 185 F.2d 859 (5th Cir. 1950), cert. den. 341 U.S. 940 (1951); Harlow v. Ryland, 78 F. Supp. 488 (E.D. Ark. 1948), aff'd 172 F.2d 784 (5th Cir. 1949). (States can also limit this power, but not irrevocably, in their constitutions and State legislation.)

Pursuant to this police power, State efforts to protect and conserve resources within State borders have been upheld. State v. Standard Oil Co. of Louisiana, 188 La. 978, 178 So. 601, 610 (1937), C.C. Julian Oil and Royalties Co. v. Capshaw, 145 Okla. 237, 292 P. 841, 843-44 (1930).

Pursuant to the Tenth Amendment, States can generally regulate intrastate services performed by public utilities such as conserving natural resources within their borders. Public Utilities Commission for State of Kansas v. Landon, 249 U.S. 236 (1919); Gulf Water Benefaction Co. v. Public Utility Commission, 674 F.2d 462 (5th Cir. 1982).

More specifically, if a State wishes to prevent wasteful consumption of utility services, such as electrical power, the State, pursuant to its powers over utilities, may require or encourage these utilities to implement programs designed to conserve energy. See Consolidated Edison Co. v. Public Service Commission, 47 N.Y. 2d 94, 390 N.E. 2d 749, 753 (1979), rev'd on other grounds, 447 U.S. 530 (1980).

The State's objective may be achieved by adopting a rate structure which promotes conservation. N.Y. State Council of Retail Merchants v. Public Service Commission of N.Y., 45 N.Y. 2d 661, 384 N.E. 2d 1282, 1288 (1978). In addition, DOE believes that based on States' broad powers over utilities, States could also require utilities to implement a utility audit program. DOE believes that methods for implementation of any such program should be left to each individual State.

Some States, in fact, have enacted legislation to permit or require utility audit programs. See e.g.: California Public Utility Code §2789 (West Supp. 1985) (RCS-type audit); Mass. Ann. Spec. Law ch. 61 (Michie/Law. Co-op Supp. 1985) (RCS-type audit); N.Y. Pub. Serv. Law §135 (McKinney 1979) (RCS-type audit); Or. Rev. Stat. §§469.631 et seq. (1983) (RCS-type audit) and Or. Rev. Stat. §469.860 et seq. (1983) (CACS-type audit). Research to date has revealed no legal challenge to these statutes.

We are also attaching Table 3.1, entitled "Existing Programs," from the CACS Regulatory Impact Analysis, which lists eighteen State CACS-type programs, either set up as a result of specific State legislation or set up voluntarily by the utilities, apparently without reliance on the Federal CACS legislation for their effect. We will attempt to confirm this in our survey, discussed in a subsequent response.

In the survey, we will also ask about court challenges to CACS or CACS-type programs. So far as we are currently aware, there is only the Michigan case, discussed elsewhere, challenging both RCS and CACS-type activities. That case apparently involves no State CACS statute.

Question:	Please survey the authority available under State law to require or permit gas and electric utilities to carry out activities described in the Federal CACS statute in the States with approved CACS plans and in the States whose plans may be approved in the next three months. Also, please provide the Subcommittee those cases in which State statutes have been challenged.
Answer:	As requested, the Department is initiating a survey of the authority in the States with approved CACS plans and in States whose plans may be approved in the next three months to require or permit utilities to carry out activities described in the Federal CACS statute. We will forward the results of this survey to the Subcommittee when received.

To our knowledge there have been no challenges to State statutes enacting a commercial audit program. We will attempt to confirm this through our survey of the existing State authority.

In Michigan, we understand that no State statute was challenged. Rather, an order of the Public Service Commission requiring a commercial audit program was the subject of a challenge in the United States District Court, Eastern District of Michigan. Control Temp Consultants, Inc. v. Detroit Edison Co., No. 83 Civ. 1080 (E.D. Mich.). An initial complaint and an amended complaint both have been dismissed. We understand no further complaint has been filed. We have attached copies of the Court's orders.

QUESTIONS FROM SENATOR NICKLES

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS)

Question: Please provide the Committee with a full description of how the estimated energy savings, overall costs and costs per audit you quoted at the hearings are derived. For example, what assumptions do you make about the amount and kind of energy consumed in commercial and apartment buildings, the value of energy saved in the future, the response of the target firms, the savings per measure, the measures that will be implemented, and the extent of implementation of energy efficiency measures in commercial and apartment buildings in the absence of a Federal CACS program?

Answer: The Department estimated total annual energy use (in end-use terms) for apartments and commercial buildings covered by CACS to be 1.1 Quads per year. Assuming a 5% penetration rate (i.e. 5% of the eligible buildings are audited) and a 5% energy-savings rate (i.e., an additional 5% reduction in energy use in audited buildings), total first year energy savings for CACS apartments would be 0.002 Quads. For CACS commercial buildings, total first year energy savings would be .001 Quads. Based on the above assumptions, therefore, CACS saves 0.003 Quads in the first year of operation. The overall annual cost of CACS, assuming a 3% penetration rate, is $31 million. DOE's procedure for estimating this cost and the cost per audit is described in the DOE Final Regulatory Impact Analysis for CACS.

QUESTIONS FROM SENATOR NICKLES

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS)

Question: On what are your estimates of energy efficiency improvements from Federal CACS activities based? Actual methodology? Engineering estimates? Describe your methodology in detail.

Answer: DOE's estimate of first year energy savings of the CACS Program is based upon the assumption of a 5% penetration rate and a 5% energy-savings rate. A DOE evaluation of the RCS program (copy attached),* based on actual energy use data, estimated the RCS penetration and energy-savings rates to be 1.7% and 4% respectively. We know energy consumption of the CACS target sector is 1.1 quadrillion BTU's. The assumed penetration and energy savings rates yield a total energy savings of .003 quads (1.1 x .05 x .05 = .00275).

---

*Retained in Subcommittee files.

DOE/CE-0086 **U.S. Department of Energy** January 1984

Assistant Secretary, Conservation and
Renewable Energy
Deputy Assistant Secretary for Conservation
Division of Building Services

RESIDENTIAL CONSERVATION SERVICE

EVALUATION REPORT

tes United States United Stat
Energy Department of Energy
s United States United States
artment of Energy Departme
nited States United States U
Department of Energy Depar
States **United States** United S
nergy **Department of Energy**

QUESTIONS FROM SENATOR NICKLES

COMMERCIAL AND APARTMENT CONSERVATION SERVICE (CACS)

Question: Please provide the Committee with any studies and reports in your possession that address the cost or benefits of the CACS Program. Provide your evaluation of these studies and reports.

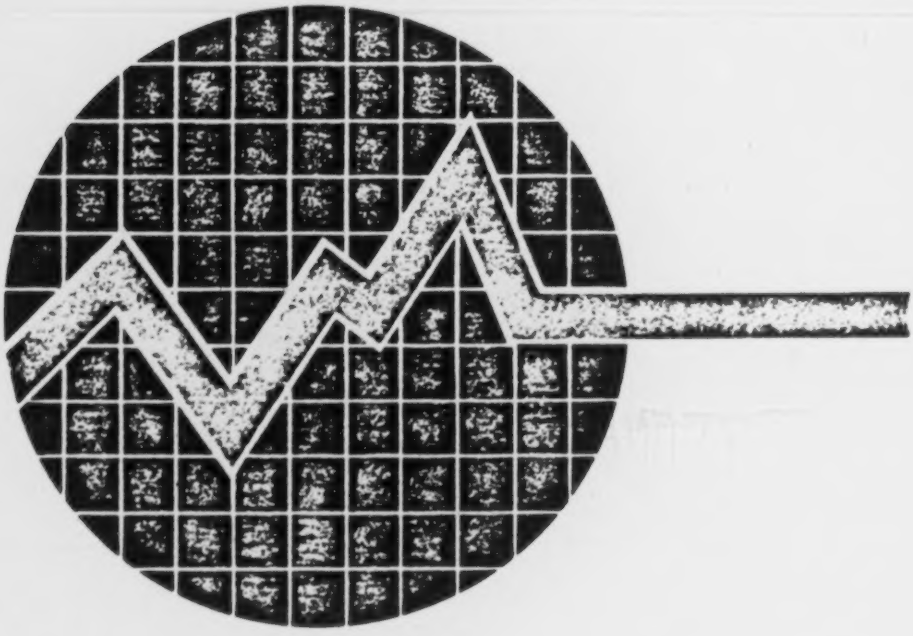
Answer: DOE currently does not have any studies or reports that address the costs and benefits of the CACS Program, except for the CACS Regulatory Impact Analysis. We have included a copy of the State of Michigan's Pilot Project Summary for the Commercial Energy Audit Service[*] which addresses the potential benefits of its particular program.

---

[*] Retained in Subcommittee files.

Commercial Energy Audit Service

Michigan Pilot Project Summary



QUESTIONS FROM SENATOR NICKLES

RCS/CACS COMPETITION ISSUES

Question:	Small business representatives asserted at the hearing that DOE and FTC have not been effective at preventing unfair competition by utilities in the energy conservation field. What is the Department's assessment of this problem and its response to the problem?
Answer:	DOE is not aware of widespread anti-competitive activity occurring under the RCS program. Annual reports submitted by lead agencies are expected to include information on any unfair competition or anti-competitive activity. DOE's "4th Annual Report on Financing, Supply, and Installation Activities of Public Utilities in Connection with the Residential Conservation Service Program", which summarizes these reports, indicated that many utilities engage in supply and installation activities, but does not find evidence of abuse.

In its 1982 report to Congress on the activities under Part 1, Title II of NECPA, the FTC stated: "we have been able to identify several instances in which potential problems may arise, but we stress that we have not yet found any evidence that these potential problems have actually arisen" (Residential Conservation Service - Report of the Federal Trade Commission, Vol. I, pg. 5).

DOE is unaware of any problems of unfair competition as it relates to the CACS program, possibly because the CACS program is just beginning to be implemented. Some anecdotal experiences and hypothetical situations were described at the hearing held on the proposed CACS Federal Standby Plan. Testimony and written comments also indicated that some utilities do market energy conserving devices and do provide audits at a lower cost than can be charged by small businesses that provide them. These activities, however, need not necessarily cause anticompetitive problems. In an effort to determine positive as well as negative impacts of utility/small business relationships, DOE is conducting a study on utility/contractor cooperation in CACS implementation. This study entitled "Utility/Contractor Cooperation in the Provision of Commercial and Multifamily Audit Services" examines a variety of mutually-beneficial relationships between contractors and utilities. It will identify elements that make these relationships work, problems which may be encountered, and considerations that are important for other utilities interested in similar cooperative arrangements. It is hoped that utilities and local contractors will use the ideas and case studies presented in this study to initiate better and more productive relationships. A report is expected to be completed in July of this year and a copy will be sent to the Subcommittee.

QUESTIONS FROM SENATOR NICKLES

RCS/CACS COMPETITION ISSUES

Question: Do you believe that the current protections against anti-competitive practices in NECPA, are adequate to address the problem, or should they be strengthened?

Answer: Based upon information to date, DOE believes that present anti-competitive safeguards are sufficient to preclude abuse in the RCS Program. DOE believes that the limited protections in NECPA for the CACS Program, combined with provisions included in our regulations, and recommendations and suggestions contained in the preambles to our regulations, offer sufficient protection to deter anti-competitive activities. When and if isolated problems occur, they should be handled at the State level, probably by the utility regulatory authority.

QUESTIONS FROM SENATOR NICKLES

RCS/CACS COMPETITION ISSUES

Question:	Could you please provide data on the level of complaints of anti-competitive practices at the State level and how states have responded, such as with special legislation?
Answer:	For information on complaints about anti-competitive practices, we rely largely on RCS annual reports submitted by lead agencies. To date, these reports have not indicated significant anti-competitive problems. Should complaints arise they are usually handled at the State level. DOE's "4th Annual Report on Financing, Supply, and Installation Activities of Public Utilities in Connection with the Residential Conservation Service Program" (copy enclosed) summarizes utility activity in areas which potentially could be anti-competitive. Moreover, as we discussed previously, the FTC identified several instances in which potential problems may arise but emphatically noted that there was no evidence that these problems had actually arisen. DOE has no information on the level of complaints which occur at the State level under the CACS program. Because the CACS Program is just getting underway, it is unlikely that any anti-competitive activities relating to CACS have occurred.

DOE 4TH ANNUAL REPORT ON FINANCING, SUPPLY & INSTALLATION ACTIVITIES OF PUBLIC UTILITIES IN CONNECTION WITH THE RESIDENTIAL CONSERVATION SERVICE PROGRAM

U.S. DEPARTMENT OF ENERGY

Under the Residential Conservation Service (RCS) Program, established by Part I of Title II of the National Energy Conservation Policy Act (NECPA) as amended by the Energy Security Act (ESA), large gas and electric utilities are required to offer on-site energy audits and other services to their residential customers to encourage the installation of energy conservation measures.

Section 216(g) of NECPA requires that the Secretary of Energy:

"...in consultation with the Federal Trade Commission shall monitor financing, supply and installation activities of public utilities in connection with residential energy conservation measures and shall report annually to Congress on such activities. Each such report shall contain the comments of the Federal Trade Commission."

A. STATUTORY BACKGROUND

1. NECPA Provisions

Because of Congressional concern that the utilities might abuse the entry the RCS Program provides to their customers' homes to market merchandise in a potentially anti-competitive manner, Section 216(a) of NECPA prohibits covered utilities from supplying or installing residential energy conservation or renewable resource measures, except in certain circumstances.[1]

Under NECPA, exemptions from the Section 216(a) prohibitions are allowed under Section 216(b) for the supply and installation of certain specific energy conservation measures, including furnace efficiency modifications, clock thermostats, and devices associated with load management. The Energy Security Act under Section 216(c) allowed an exemption for a utility to supply and install measures through subcontracts with independent suppliers and contractors who are listed on the RCS Master Record and who are not under the control of the public utility or its affiliates or subsidiaries. Such subcontracting services must also meet certain other requirements specified in Section 216(c), which insure protection against unfair methods of competition or adverse effects on competition.

Furthermore, Section 216(d) states that the prohibition shall not apply to--

1. The supply or installation of those specific residential energy conservation measures which the Secretary determines were being supplied or installed by a public utility on November 9, 1978;

---

[1] NECPA originally also prohibited utilities from financing most measures, but that prohibition was repealed by the ESA.

2. Supply or installation activities which the Secretary determines were broadly advertised or for which substantial preparations were completed on or before November 9, 1978; or

3. Supply or installation activities by a public utility with respect to energy conservation measures where a law or regulation in effect on or before November 9, 1978, either requires or explicitly permits the public utility to carry out such activities.

Finally, under Section 216(e), the Secretary may, upon petition of a covered utility, waive the prohibitions if the utility demonstrates to the satisfaction of the Secretary that in carrying out prohibited activities fair and reasonable prices and rates of interest will be charged, and the Secretary finds, after consultation with the Federal Trade Commission (FTC), that such activities would not be inconsistent with the prevention of unfair methods of competition and the prevention of unfair or deceptive acts or practices.

B. DOE Actions

1. State Plan Amendments for Subcontracting Exemptions

The June 25, 1982, (47 FR 27752) Final Rule for the RCS program requires that before a utility can undertake a subcontracting supply or installation program as allowed by NECPA Section 216(c), the State Plan must be amended to incorporate procedures to assure that such activities are undertaken in a manner consistent with Section 216(c) requirements. Specifically Section 456.504 of the RCS Final Rule requires that any supplier or installer involved in a utility subcontracting program --

- be on the Master List for the RCS program;
- not be subject to the control of the public utility except for the performance of the subcontracting agreement;
- not be a subsidiary or affiliate of the utility; and
- be selected in a fair and non-discriminatory fashion.

The section further requires of utility subcontracting programs that --

- they not involve unfair competition;
- they not adversely affect competition;
- they not result in providing an unreasonably large share of contracts to any supplier or installer;
- with certain limitations, if utility financing of a measure is made available, it must be available for the

installation of that measure(s) by any participating contractor or for the purchase of such measures to be installed by customers;

- reasonable steps be taken to minimize the cost of measures to customers; and
- the average cost of measures supplied or installed by the program be made available, upon request.

Since the date of the last annual report to Congress on utility programs, DOE has approved procedures to govern utility subcontracting programs for Montana and North Dakota. To date no utilities in these States have notified DOE of any ongoing subcontracting programs.

2. Waivers

Since the date of the last annual report to Congress on utility programs, four utilities have submitted petitions for waivers to DOE. One Pennsylvania utility petitioned for a waiver to supply storm and thermal doors. Subsequently this utility informed DOE that it had formally withdrawn its petition. A Wisconsin utility petitioned DOE for a waiver for the installation of wind energy devices. DOE's review of the waiver petition resulted in the findings that the device had only commercial application and, as a result, that the NECPA prohibition was not applicable. DOE informed the Wisconsin utility that no waiver was required for the described activities. Two Vermont utilities recently petitioned for a waiver to supply various energy conservation measures. These petitions are presently under review. In summary, DOE has not approved any additional waiver requests since the date of the last annual report.

C. DOE MONITORING ACTIVITY

The primary sources of current information available to DOE on utility supply, installation and financing programs are the RCS Annual Reports that States and nonregulated utilities are required to submit to DOE under the RCS regulations. In an effort to obtain consistent data for the monitoring of these activities and other RCS program elements, DOE provided a reporting guidance document to States and nonregulated utilities in May 1984.

In that guidance, the following information regarding financing, supply and installation activities was requested:

Utility direct financing activities. For each covered utility that offers loans or other financing for the supply or installation of residential energy conservation measures as defined by NECPA, provide the name of the utility, a brief description of the nature of the loan or other financing program, the appropriate number of loans requested in the reporting period, the approximate number of loans provided in the reporting period, and the average value of loans provided (if available).

> Exempted or waived utility supply or installation activities. For each covered utility that is conducting exempted or waived supply or installation activities (including supply and installation activities through subcontractors under Section 10 CFR 456.504), provide the name of the utility, a brief description of the nature of the supply or installation program, the approximate number of supply activities requested and the approximate number performed in the reporting period, and the approximate number of installation activities requested and the approximate number performed in the reporting period.

In addition DOE reminded States that when utilities undertake programs of supplying or installing residential energy conservation measures permitted under the subcontractor exemption (10 CFR 456.504) or provide financing for the purchase or installation of such measures, utilities are required to notify DOE when such programs become effective.

To date, DOE has reviewed RCS annual reports covering the period of April 1, 1983 through March 31, 1984 from 31 States and 27 nonregulated utilities. Even with the specific guidance provided by DOE, the quality and completeness of the information received in the reports on such activities varied broadly. Data included in these reports, however, were more comprehensive than the data provided in the previous year.

On the following two pages is Exhibit 1 which indicates the activities of utility programs as documented by the 1984 annual reports. Each State is listed alphabetically. Utilities reporting directly to DOE are listed under their respective States. A blank in the table indicates that the 1984 annual report was not available for review.

As indicated in Exhibit 2, many of the reports indicated either that no programs existed in the State or at the utility (31 percent) or programs existed but no activities took place during the reporting period (16 percent). For an additional 28 percent of reporting states or utilities no data were available for activities undertaken during the reporting period. In some cases the reports indicated that programs were active, but did not provide quantitative information on activities. In other cases, programs were simply identified. It is likely that some proportion of these programs were inactive during the reporting period, however, it is not possible to determine an exact number from information supplied with the annual reports.

In the remaining 25 percent of reports, states or utilities reported some level of activity and provided quantitative information on installation, supply or financing actions. These programs are summarized by state below. In addition where there appeared to be active programs but no quantitative data were provided, the program is described.

Installation and supply programs reported in the 1984 annual reports included the following.

> Arkansas. Two covered utilities were reported to supply and install (and also finance) replacement central air conditioners; no data were provided on activities.

RCS ANNUAL REPORTS

EXHIBIT 1

UTILITY INSTALLATION, SUPPLY, AND FINANCING PROGRAM ACTIVITIES	1984 Annual RCS Report Received	1983-84 Reporting Period Installations Actions(1)	Supply Actions(2)	Finance Actions(3)	Total Value
Alabama	Yes	N.A.	No programs	No programs	—
Alaska (FSP state)	No				
Arizona (FSP state)	No				
-Salt River Project	No				
Arkansas	Yes	45 jobs	N.A.	N.A.	N.A.
California	Yes	4,576	N.A.	734,704 loans	N.A.
				11,970 rebates	N.A.
-Anaheim Utilities Dept	Yes	No programs	No programs	No programs	—
-Glendale Public Service	Yes	N.A.	N.A.	N.A.	N.A.
-Imperial Irrigation District	No				
-L. A. Dept of Water and Power	Yes	No programs	No programs	107 loans	N.A.
-Modesto Irrigation District	Yes	0	0	0	0
-Palo Alto Utilities Dept	Yes	113	No programs	127 loans	$271,016
-Riverside Public Utilities	Yes	N.A.	N.A.	N.A.	N.A.
-Sacramento MUD	No				
-Santa Clara Electric Dept	Yes	0	0	0	0
-Turlock Irrigation District	Yes	N.A.	N.A.	N.A.	N.A.
Colorado	Yes	N.A.	N.A.	0	0
Connecticut	Yes	33,435 jobs	No programs	No programs	—
D.C.	No				
Delaware	Yes	No programs	No programs	No programs	—
Florida	Yes	N.A.	535 measures	2,099 loans	$5,249,200
Georgia	Yes	0	0	No programs	—
Hawaii	No				
Idaho (FSP state)	No				
Illinois	No				
Indiana	No				
Iowa	No				
Kansas (No RCS plan)	No				
-Kansas City Bd Public Utilities	Yes	No programs	No programs	No programs	—
Kentucky	Yes	N.A.	N.A.	N.A.	N.A.
Louisiana	Yes	N.A.	N.A.	N.A.	N.A.
-Lafayette Utilities System	No				
Maine	Yes	3,131	0	265 rebates	N.A.
				168 loan subsidies	N.A.
Maryland	Yes	N.A.	N.A.	No programs	—
Massachusetts	Yes	55 jobs	50 kits	455 rebates	$40,000
Michigan	No				
Minnesota	Yes	319 measures	72 measures	No programs	—
Mississippi	Yes	59	107	59	N.A.
Missouri (No RCS implementation)	No				
Montana	Yes	N.A.	N.A.	N.A.	N.A.
Nebraska	—	—	—	—	—
-KN Energy	Yes	0	0	0	0
-Lincoln Electric System	No				
Metro Utilities District, Omaha	Yes	0	0	0	0
-Minnegasco	Yes	N.A.	N.A.	No programs	—
-Nebraska Public Power	Yes	No programs	No programs	No programs	—
-Northwestern Public Service	Yes	0	0	0	0

RCS ANNUAL REPORTS

EXHIBIT 1

UTILITY INSTALLATION, SUPPLY, AND FINANCING PROGRAM ACTIVITIES	1984 Annual RCS Report Received	1983-84 Reporting Period			
		Installations Actions(1)	Supply Actions(2)	Finance Actions(3)	Finance — Total Value
-Omaha Public Power District	Yes	0	0	No programs	---
-Peoples Natural Gas	Yes	23 measures	0	0	0
Nevada	No				
New Hampshire	Yes	No programs	No programs	No programs	---
New Jersey	Yes	1,550	6,000	423 loans 12,357 rebates	$1,833,741 $2,035,679
New Mexico	Yes	No programs	No programs	No programs	---
New York (No RCS plan)	Yes	No programs	No programs	5741 loan subsidies	$750,423
North Carolina	Yes	354	0	1470 loans 868 loan subsidies	$767,830 N.A.
North Dakota	Yes	N.A.	N.A.	N.A.	N.A.
Ohio	Yes	No programs	No programs	N.A.	N.A.
Oklahoma	Yes	• 24,407	No programs	287 measure	N.A.
-Cities Service Gas	No				
-NW Central Pipeline	Yes	N.A.	N.A.	N.A.	N.A.
Oregon	No				
-Central Lincoln PUD	No				
-Eugene Water and Electric Bd	No				
Pennsylvania	Yes	N.A.	N.A.	N.A.	N.A.
Rhode Island	Yes	N.A.	N.A.	N.A.	$1,200,000
South Carolina	Yes	N.A.	N.A.	N.A.	N.A.
-Santee Cooper	Yes	0	0	0	0
South Dakota	Yes	No programs	12	No programs	---
Tennessee	No				
-Tennessee Valley Authority	Yes	N.A.	No programs	10,863 loans	$12,928,664
Texas	Yes	N.A.	3200 kits	515 loans over	$304,000
-Panhandle Eastern Pipeline	Yes	No programs	No programs	No programs	---
Utah (FSP state)	No				
Vermont	No				
Virginia (FSP state)	No				
-Richmond Dept Public Utilities	Yes	No programs	No programs	No programs	---
Washington	No				
-Benton Co PUD	Yes	No programs	No programs	1,500 BPA grants;	$2,186,500
-Chelan Co PUD	No				
-Clark Co PUD	Yes	No programs	No programs	5,586 BPA grants	N.A.
-Cowlitz Co PUD	Yes	No programs	No programs	3,350 BPA grants;	$4,355,000
-Grant Co PUD	Yes	No programs	No programs	142 BPA grants;	$235,010
-Grays Harbor Co PUD	Yes	No programs	No programs	713 BPA grants	N.A.
-Seattle City Light	No				
-Snohomish Co PUD	Yes	2,681	No programs	11,970 BPA grants 1,000 loans	$18,509,333 / N.A.
-Tacoma City Light	No				
West Virginia	Yes	326	250 jobs	79 loans	$51,657
Wisconsin	Yes	2734 jobs	745 measures	778 loans	$1,626,960
Wyoming (FSP state)	No				
TOTAL REPORTS RECEIVED	50				

EXHIBIT 1

RCS ANNUAL REPORTS

UTILITY INSTALLATION,
SUPPLY, AND FINANCING
PROGRAM ACTIVITIES

KEY: — Not applicable
N.A. No data available in annual report.
No programs State or utility specifically indicated that no programs existed.
0 No activity reported although programs reportedly exist.

(1) Refers to activities conducted as part of utility programs that install RCS measures.
(2) Refers to activities conducted as part of utility programs that supply RCS measures.
(3) Refers to activities conducted as part of utility programs that help to finance the installation/supply of RCS measures.

EXHIBIT 2: STATUS OF UTILITY PROGRAMS

TYPE OF PROGRAM

PROGRAM ACTIVITY LEVEL	INSTALLATION		SUPPLY		FINANCING		SUB-TOTALS			
	STATE REPORTS	UTILITY REPORTS	STATE REPORTS	UTILITY REPORTS	STATE REPORTS	UTILITY REPORTS	STATE REPORTS	UTILITY REPORTS	TOTALS	PERCENT
NO PROGRAM	6	11	8	14	8	7	22	32	54	31.0
INACTIVE	1	7	3	8	1	7	5	22	27	15.5
ACTIVE	12	3	8	0	12	3	32	12	44	25.3
N.A.	12	6	12	5	10	4	34	15	49	23.2
SUB-TOTALS	31	27	31	27	31	27			174	100.0

California. Several covered utilities had installation programs. One utility provided 4,576 free weatherization services. Data on other installation actions were not provided. One non-regulated utility conducted 113 installation jobs.

Connecticut. One covered utility provided low cost weatherization services to 33,435 homes.

Florida. One utility supplied 535 water heater blankets. A second utility supplied an unreported number of water heater blankets.

Louisiana. Two utilities supply and/or install central air conditioners and insulation for employees only. No data on activities were reported.

Maine. One utility installed 3,131 low cost weatherization measures.

Massachusetts. Several utilities have supply and installation programs. Partial data on program activities indicated that 55 low-cost weatherization jobs were conducted and 50 weatherization kits were distributed.

Minnesota. One utility installed 372 measures and supplied 72 measures.

Maryland. One utility supplies and installs a wide range of measures, but provided no data on activities.

Mississippi. Covered utilities installed 59 measures and supplied 107 measures through programs open only to utility employees.

New Jersey. One utility's RECAP program installed measures in 1,235 homes; a second program at that utility installed low cost measures as a part of the audits of at least 315 homes. Several other "wrap-up, seal-up" programs installed measures; another program provided 6,000 weatherization kits to low-income households. The number of activities in "wrap-up, seal-up" type programs were not reported.

North Carolina. One utility installed 314 measures; a second installed 80 measures.

Oklahoma. Two utilities install load management devices for central air conditioners. A total of 24,407 such devices were installed.

Pennsylvania. Five utilities operate installation and/or supply programs. No data on program activities were provided.

Rhode Island. RISE operates several programs to provide weatherization services. One program installed over $200,000 worth of measures; data on other programs were not available.

South Carolina. One covered utility reportedly has a supply and installation program, but no data on activities were provided.

South Dakota. One utility supplied 12 measures to customers.

Tennessee Valley Authority. TVA through its distributors installed an unreported number of load management devices.

Texas. Three utilities distributed 3,280 free weatherization kits. Two utilities' supply and installation programs were inactive; a third utility's supply program for insulation and gas appliances provided no data on activities.

West Virginia. One utility program resulted in the installation of 326 measures. A second program supplied weatherization materials to 250 homes.

Wisconsin. Eleven utilities provided weatherization services valued at $3.9 million to 2,734 homes. Three utility programs supplied a total of 745 measures.

Financing programs reported by states and utilities included loans, loan subsidy programs, rebates, and grants. A State-by-State summary of programs follows.

Arkansas. Two utilities finance central air conditioners, but provided no data on activities.

California. Eight covered utilities provided 734,704 loans. One covered utility also provided 11,970 rebates for weatherization services. One non-regulated utility gave out 107 loans. A second non-regulated utility provided 127 loans with a total value of $271,016.

Florida. Five covered utilities provided a total of 2,099 loans with a total value of $5,249,208.

Kentucky. One utility provided low-interest insulation loans, but provided no data on activities.

Louisiana. Two utilities financed measures only for their employees, but provided no data on activities.

Maine. Two utilities provided a total of 168 loan subsidies (i.e., utility pays the difference between 6 percent interest and the market interest rate). One utility provided 265 appliance rebates, rebates included both measures and non-measures.

Massachusetts. One utility provided 455 rebates to customers for purchasing conservation measures. Rebates had a total value of $40,000.

Mississippi. Covered utilities financed 59 measures as part of programs open only to utility employees.

Montana. One utility indicated that it had a zero-interest loan program, but provided no data on program activities.

New Jersey. Two utilities provided 409 loans with a total value of $1,033,741. Three utilities gave out 13,387 rebates valued at $2,038,679 for air conditioners. Some of these air conditioners would be considered measures; others would not.

New York. Nine utilities provided interest-rate subsidies for 5,741 loans. The subsidies were worth $750,423; total value of loans was $12,193,354.

North Carolina. Four utilities provided a total of 1470 loans valued at $767,830. One of these utilities also subsidized the interest costs of 868 loans.

Oklahoma. Four utilities financed 287 measures for their employees.

Pennsylvania. Four utilities operated loan programs, but provided no data on program activities.

Rhode Island. RISE provided an unreported number of loans worth approximately $1,200,000.

South Carolina. One utility finance program was reported, but no data on activities were provided.

Tennessee Valley Authority. Through a TVA finance program, 10,863 loans valued at $12,928,664 were provided through TVA distributors.

Texas. Three utilities provided 325 loans of unreported value. A fourth utility provided 190 loans worth $304,000.

Washington. Two non-regulated utilities reported a total of 6,299 grants under a Bonneville Power Administration program. Three other utilities also reported BPA grant activities. These three distributed a total of 5,080 grants worth $6,776,510. One non-regulated utility also provided about 1,800 loans.

West Virginia. Two utilities provided 79 loans valued at $51,657.

Wisconsin. Two utilities provided 778 loans for conservation measures with a total value of $1,526,960.

D. COMPARISON OF 1984 AND 1983 ACTIVITIES

An important question is: How do utility installation, supply, and financing activities as reported in 1984 compare to reported activities in 1983? It would be useful to know if any trends are evidenced at the utility, State, or national level.

Problems in acquiring complete data from all States and covered utilities preclude any definite answers. Nonetheless, several observations can be made and qualified conclusions can be drawn.

In 1983 utility installation and supply programs with at least some reportable activities were operating in 11 States. In 1984 11 States provided data on activities in utility installation and supply programs. In 1983 evidence of active financing programs was available for utilities in 16 States; the comparable figure for 1984 is operating utility financing programs in 11 States.

Using a fairly crude measure, installation and supply programs are as evident in 1984 as in 1983. On the other hand there are fewer operating financing programs in 1984 compared to 1983.

By looking at States with high levels of activity in the two reporting periods, a clearer picture of changes over time emerges. In 1983 utility installation and supply programs in four States reported serving 1,000 or more households: California, Maryland, Oklahoma, and Oregon. These four States represented the vast majority of all reported installation and supply activites. In 1984, seven states had utility installation and supply programs which served at least 1,000 households: California, Connecticut, Maine, New Jersey, Oklahoma, Texas, and Wisconsin. In California and Oklahoma these programs served more customers in 1984 then they did in 1983. Connecticut utilities installed three measures in 1983, but installed measures in more than 33,000 homes in 1984. Maine reported no activities in 1983, but installed 3,131 low cost measures in 1984. New Jersey reported installations for four customers in 1983; with incomplete data New Jersey reported installations at over 1,500 homes and the distribution of 6,000 weatherization kits in 1984. Three Texas utilities distributed 3,280 weatherization kits in 1984; none was supplied in 1983. In 1984 Wisconsin utilities weatherized 2,734 homes and supplied 745 measures; in 1983, Wisconsin utilities supplied 572 measures. Maryland provided no data on activities in 1984; however, the one installation and supply program covers an insulation company owned by a covered utility. In all likelihood 1984 activities were similar in number to those of 1983. The 1984 Oregon report was not submitted at the time of this report.

The conclusion from this State level comparison is that installation and supply programs have been more active in 1984 than in 1983. Utilities in Connecticut and New Jersey have initiated new programs or revised old programs which are substantially more active. In the case of New Jersey this action was taken in response to an order by the state regulatory agency. In both years high levels of activity were reported in a relatively few States. Although it appears that there is an increasing emphasis on installation and supply programs, many of which focus on low-cost measures, DOE has received no complaints about specific utility activities.

In 1983 seven States reported a minimum of 1,000 loans or other financing actions: California, Michigan, North Carolina, Oregon, Pennsylvania, TVA, and Washington. In 1984 there were six States with at least 1,000 financing actions: California, Florida, New York, North Carolina, TVA, and Washington. In California, 323,027 loans were made in 1983; in 1984, 734,704 loans were made. In 1983 New York utilities subsidized 10,369 loans; in 1984 5,741 loans were subsidized. The numbers for the two years for North Carolina are 1,726 loans and 1,470 loans. In 1983 TVA made loans worth $79 million; TVA loans in 1984 numbered 10,863 and were worth almost $13 million. Non-regulated utilities in Washington provided over 20,600 BPA grants in 1983; in 1984 these utilities provided over 11,000 such grants. Florida had an active financing program in 1984 which provided over 2,000 loans worth over $5 million; in 1983 Florida utilities provided an unreported number of loans worth over $800,000. Michigan and Oregon had active financing programs in 1983; however, the 1984 annual reports for these States were not available for review at the time of this report. Pennsylvania, with active loan programs in 1983, provided no data on activities in 1984.

It is more difficult to draw conclusions about trends in financing programs, particularly because 1984 annual reports are unavailable from key states. Clearly programs in California and Florida are more active, while those in North Carolina, New York and Washington and at TVA show decreased levels of activity. As is true with installation and supply programs, a relatively small number of States appear to account for almost all financing actions. Although no overall trend appears to be evident, it is reasonable to observe that major programs are still operating in a few States. In general no signs of major decreases in demand for this financial assistance are evident.

FEDERAL TRADE COMMISSION
WASHINGTON, D.C. 20580

OFFICE OF THE SECRETARY

November 5, 1984

Honorable Donald Paul Hodel
Secretary
Department of Energy
James Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Hodel:

By letter dated October 1, 1984, the Acting Assistant Secretary, Conservation and Renewable Energy sent to the Commission the Department of Energy's annual report to Congress regarding utilities' financing, supply, and installation activities in connection with their Residential Conservation Service programs. Section 216(g) of the National Energy Conservation Policy Act, which mandates this report, also provides that "[e]ach such report shall contain the comments of the Federal Trade Commission." Enclosed herewith are the Commission's comments.

By direction of the Commission.

Emily H. Rock

Emily H. Rock
Secretary

COMMENTS OF THE FEDERAL TRADE COMMISSION

The following comments of the Federal Trade Commission (FTC) are provided pursuant to section 216(g) of the National Energy Conservation Policy Act. Pub. L. No. 95-619, 92 Stat. 3206, 3217 (1978) (codified as amended by the Energy Security Act of 1980, Pub. L. No. 96-294, § 547, 94 Stat. 611, 741, at 42 U.S.C. § 8217(g)) (hereinafter cited as NECPA).

WAIVER PETITIONS

With some exceptions which are not relevant, NECPA prohibits the supply or installation of a residential energy conservation measure for any residential customer by a public utility. Id. § 216(a), 42 U.S.C. § 8217(a). The Act provides, however, that the Secretary of the Department of Energy (the Secretary) may waive this prohibition if "the Secretary finds, after consultation with the Federal Trade Commission, that such activities would not be inconsistent with the prevention of unfair methods of competition and the prevention of unfair or deceptive acts or practices." Id. § 216(e), 42 U.S.C. § 8217(e).

Since the last annual report to Congress, the following events have transpired regarding utility waiver petitions:

(1) As indicated in the last annual report to Congress, on January 3, 1980, the Equitable Gas Company (Pennsylvania) requested a waiver to add the sale and installation of storm doors and energy saving doors to its existing program for the sale and installation of, *inter alia*, storm windows. On May 8,

1981, the Commission informed the Department of Energy that Equitable's petition did not contain sufficient information to determine if a waiver should be granted. Following discussions with the Department of Energy and Equitable regarding the petition, an FTC staff attorney requested more information from Equitable on September 17, 1982. This information was provided on January 10, 1983, and on June 29, 1983, the Commission informed the Secretary that the activities encompassed by the petition would not be inconsistent with the prevention of unfair methods of competition and the prevention of unfair or deceptive acts or practices.

Equitable's attorneys have informed us that the company received a series of contacts from the Small Business Administration that indicated strong opposition to the program and responsible officials, after considering the small size of the program (they expected to sell about 200 doors or storm doors per year) and the lengthy delays in getting governmental approval, decided to withdraw the petition and did so in a letter dated July 25, 1984.

(2) In a petition to the Secretary dated November 16, 1982, Windworks, Inc. (Windworks), a subsidiary of Wisconsin Power and Light Company, sought a waiver in order to supply and install wind generation systems and related equipment to residential customers. The petition was informally transmitted to a staff attorney in the Bureau of Competition by an analyst at the Department of Energy on December 8, 1982. The staff attorney, in a letter dated December 28, 1982, forwarded to the Department of

Energy various questions which he believed the utility should answer as a supplement to its petition and the Department of Energy requested additional information from the utility in a letter dated January 26, 1983. This information was supplied by the utility in a letter dated July 20, 1983, to the Department of Energy.

Subsequently, FTC staff requested confirmation from the Department of Energy that the Department considered the petition necessary for the utility to sell the equipment (since it did not appear to meet the statutory definition of a residential energy conservation measure), that the petition met all of the Department's requirements, and that FTC comments were now appropriate. In a letter dated March 10, 1984, the Department notified all parties that the program "does not involve the sale of a residential energy conservation measure to residential customers. For example, the minimum cost for the wind energy system is $33,500 (installation not included). Moreover, the system has a 12kW capacity compared to a typical residential system which is between 2kW and 5kW. Accordingly, DOE is dismissing the petition without prejudice."

(3) In a petition dated January 9, 1984, Green Mountain Power Company, a regulated public electric utility, requested a waiver for the continued sale, at a subsidized price, of water heater insulation jackets. The utility, pursuant to a program approved by the Vermont Department of Public Service, has been selling about 750 jackets per year for $10.00 each, although it appears that the average total cost for sales of these jackets is

approximately $14.00. FTC staff interviewed key personnel of both the utility and the Vermont Department of Public Service and obtained estimates indicating that, although ratepayers bear the immediate expense of the $4.00 cross-subsidy, ratepayers save approximately $15.00 per year thereafter because it would cost the utility $15.00 more to provide the electricity saved by a jacket than the customer would have paid for this electricity if the customer had not installed the jacket. Staff is currently reviewing this petition.

UTILITY COMPETITION IN RETAIL MERCHANDISE AND SERVICES MARKETS

The House Subcommittee on Antitrust and Restraint of Trade Activities Affecting Small Business held a hearing on May 22, 1984, regarding the effect of utility competition with small business. Testimony was presented at this hearing from Frank S. Swain, Chief Counsel for Advocacy, Small Business Administration; the Alliance for Fair Competition; businessmen directly affected by utility competition; the National Association of Regulatory Utility Commissioners; the American Gas Association; the Edison Electric Institute; and Winston S. Moore, Assistant Director, Bureau of Competition, Federal Trade Commission.

In his testimony, Mr. Moore first discussed how cross-subsidization by a utility of its unregulated business could cause a misallocation of resources. He noted that in the event that consumer injury occurred as a result of cross-subsidization, there were two possible courses of action available to the FTC: (1) a law enforcement action if the utility's actions rose to the level of an antitrust violation; or (2) intervention in state regulatory commission proceedings to point out the harm that could result from the continuation of the cross-subsidy.

Mr. Moore also outlined efforts by attorneys from the Bureau of Competition and economists from the Bureau of Economics to examine this issue. Mr. Moore noted that the Bureau of Competition had focused on "several specific instances of possibly anticompetitive activities by diversified utilities and other parties." He informed the Subcommittee that the Bureau of Economics was pursuing an empirical economic study of diversified utilities.

Since the hearing, the Bureaus of Competition and Economics have continued their efforts as outlined by Mr. Moore. The Bureau of Competition has continued gathering and analyzing information from the subjects chosen for its in-depth review as well as from contractors, public utility commissions and other interested parties. At the same time, the Bureau of Economics has continued to test the hypothesis that if cross-subsidization is taking place, then it will show up in higher prices charged by the utilities in their regulated markets. This hypothesis is being tested by means of an econometric study of natural gas distribution companies, examining whether or not diversified utilities charge higher prices, *ceteris paribus*, than utilities which are not diversified.

Question: Does the Department take the view that the legal authority for the RCS program has expired?

Answer: In light of the June 3, 1985, opinion issued by the Comptroller General of the United States (copy attached) we are unable to respond to this question at this time. We will provide our response after we have carefully analyzed the opinion and assessed its implications on our position that utilities may terminate their RCS programs within a reasonable time after the last offer of services is made on or about January 1, 1985, and they have completed their actions to fulfill services.

Question: If so, would this include expiration of the protection against anti-competitive practices contained in the RCS statute practices? Does the Department believe that anti-competitive practices are not a problem, therefore protections are unnecessary, or that anti-competitive practices are a problem but that the protections have never-the-less expired?

Answer: For reasons cited in our previous answer, we will be responding to this question at a future date.

Question:	If it is the Department's view that the RCS legal authority has expired then how would that expiration affect authority for such a program under State law?
Answer:	For the reasons discussed above, we will respond to this question at a future date.

Question: Please provide data on which [RCS] programs have been challenged and whether the Federal authority was important in supporting the State authority?

Answer: To our knowledge only the RCS program in the State of Michigan has been subjected to legal challenge to date. We understand that case has proceeded to the point of dismissal of the amended complaint. The District Court's order (copy enclosed per previous response) dismissing the initial complaint states that consideration was given to both Federal and State law.

We are including in our survey of the States a request for data on any other RCS programs which may have been challenged.

Question: The Department has given the Committee its legal opinion that utilities are free to terminate their RCS programs within a reasonable time after the last notification to their customers after January 1, 1985. Please describe how this would work and how the RCS statute that remains on the books (Title II of NECPA) would affect the exercise of RCS- like programs by utilities.

For example, are utilities allowed to charge more than $15 per audit for activities similar to those described in NEPCA?

Do the provisions of NEPCA authorizing utility information, supply, and information activities continue in effect or not?

What are DOE's obligations under the statute?

What provisions of the Act affecting competition between utilities and other suppliers or installers of energy conservation measures remain in effect?

Please provide the Committee with a discussion of your views on these matters and a justification for your analysis of the RCS statute.

Answer: We will respond to the above questions after we have had an opportunity to analyze the opinion of the Comptroller General and assess its implications on this Department's position on the duration of the RCS program.

Public Utility Commission of Texas
7800 Shoal Creek Boulevard · Suite 400N
Austin, Texas 78757 · 512/458-0100

Philip F. Ricketts
Chairman
Peggy Rosson
Commissioner
Dennis L. Thomas
Commissioner

May 31, 1985

The Honorable Don Nickles
Chairman
Subcommittee on Energy
Regulation and Conservation
United States Senate
Washington, D. C. 20510

Dear Senator Nickles:

I was pleased to provide testimony before your subcommittee regarding S. 410, and I welcome this opportunity to provide follow-up information. Following is Texas' response to the questions in your letter of May 13.

1. Repeal of CACS would not affect the Texas Public Utility Commission's ability to authorize utility involvement in energy conservation. Our agency's authorizing legislation, the Public Utility Regulatory Act (PURA), was amended by the Texas Legislature in 1983 to direct the Commission to consider energy conservation and alternative energy sources in a number of regulatory proceedings: 1) the expected contribution of conservation and renewables to the state's mix of fuel resources must be considered by the Commission in developing the ten-year load forecast, to be submitted biennially; 2) a utility's efforts in energy conservation may be considered in fixing the rate of return; 3) a utility seeking a Certificate of Convenience and Necessity for new generating facilities must demonstrate that conservation and renewable resources could not have met the need for the additional plant. (See excerpted sections of the PURA, Attachment "A.")

Pursuant to these requirements in the PURA, the Commission adopted the Energy Efficiency rule last June. This rule requires utilities to submit energy efficiency plans to the Commission, on a schedule to be coordinated with the load forecast. Utilities are required to specify goals for their programs, and to quantify the costs and benefits for each individual program. The rule categorizes programs into two types: utility-controlled options and end-user conservation programs. We anticipate that this rule will provide the mechanism for any negotiations with individual utilities regarding their conservation efforts. (See Attachment "B.")

There have been no challenges to our authority under PURA, as amended. However, it should be noted that we do not have clear authority to order a utility to undertake a specific program, nor have we attempted to do so. The Texas PUC is more results oriented. We can specify the result, but in the case of residential efficiency, we would be less likely to also specify a particular means to that end. Because of the diversity of Texas, it often takes different programs in different parts of the state to achieve a common objective.

2. Again, the distinction must be made between "authorizing" and "ordering a specific program." Repeal of RCS will not affect our ability to authorize programs; but we have less clear authority to order specific conservation actions or programs. Given the track record of RCS in our state, it is not likely that utilities would seek continued authorization of the RCS program per se; however, several have similar, more flexible, and more productive residential audit programs that would remain in place.

3. Possible anti-competitive ramifications of RCS and CACS have not been a real issue among small businesses in Texas, to the best of our knowledge. We have not received complaints in this agency, nor are we aware of any that have been filed elsewhere. This may be due to the poor response to the RCS program in this state; the program never was successful enough to make anti-competitiveness a realistic problem for small businesses. The outlook for CACS does not appear much different.

In any case, the Public Utility Regulatory Act of Texas expressly prohibits a public utility from engaging in any practice that tends to restrict or impair competition with any company that sells, leases or performs services in competition with them.

Please let me know if you need clarification of these remarks, or if you need additional information. I am happy to provide whatever assistance I can.

Sincerely,

Dennis Thomas

Dennis Thomas
Commissioner

DT:ctv

Attachment

PUBLIC UTILITY REGULATORY ACT

(including Article 1446d on Electric Metering and Article 1446c-1 on Standards for Rating Solar Energy Devices)

with all amendments as of September 1, 1983

PUBLIC UTILITY COMMISSION OF TEXAS

7800 Shoal Creek Boulevard • Suite 450N • Austin, Texas 78757 • 512/458-0100

the subject matter involved in any proceeding or petition before the commission;

(7) may represent individual residential and small commercial consumers with respect to their disputed complaints concerning utility services unresolved before the commission; and

(8) may recommend legislation to the legislature which in its judgment would positively affect the interests of residential and small commercial consumers.

(g) Nothing in this section shall be construed as in any way limiting the authority of the commission to represent residential or small commercial consumers.

(h) The appearance of the Public Counsel in any proceeding in no way precludes the appearance of other parties on behalf of residential ratepayers or small commercial consumers. The Public Counsel shall not be grouped with any other parties.

(i) There shall be only one Office of Public Utility Counsel even though that office may be referenced in one or more Acts of the 68th Legislature.

ARTICLE III. JURISDICTION

Sec. 16. (a) The commission has the general power to regulate and supervise the business of every public utility within its jurisdiction and to do all things, whether specifically designated in this Act or implied herein, necessary and convenient to the exercise of this power and jurisdiction. The commission shall make and enforce rules reasonably required in the exercise of its powers and jurisdiction, including rules governing practice and procedure before the commission. The commission may call and hold hearings, administer oaths, receive evidence at hearings, issue subpoenas to compel the attendance of witnesses and the production of papers and documents, and make findings of fact and decisions with respect to administering the provisions of this Act or the rules, orders, or other actions of the commission.

(b) The commission shall develop a long-term statewide electrical energy forecast which shall be sent to the governor biennially. The forecast will include an assessment of how alternative energy sources, conservation, and load management will meet the state's electricity needs.

(c) Every generating electric utility in the state shall prepare and transmit to the commission by December 31, 1983, and every two years thereafter a report specifying at least a 10-year forecast for assessments of load and resources for its service area. The report shall include a list of facilities which will be

required to supply electric power during the forecast periods. The report shall be in a form prescribed by the commission. The report shall include:

(1) a tabulation of estimated peak load, resources, and reserve margins for each year during the forecast or assessment period;

(2) a list of existing electric generating plants in service with a description of planned and potential generating capacity at existing sites;

(3) a list of facilities which will be needed to serve additional electrical requirements identified in the forecasts or assessments, the general location of such facilities, and the anticipated types of fuel to be utilized in the proposed facilities, including an estimation of shutdown costs and disposal of spent fuel for nuclear power plants;

(4) a description of additional system capacity which might be achieved through, among other things, improvements in (A) generating or transmission efficiency, (B) importation of power, (C) interstate or interregional pooling, (D) other improvements in efficiencies of operation; and (E) conservation measures;

(5) an estimation of the mix and type of fuel resources for the forecast or assessment period;

(6) an annual load duration curve and a forecast of anticipated peak loads for the forecast or assessment period for the residential, commercial, industrial, and such other major demand sectors in the service area of the electric utility as the commission shall determine; and

(7) a description of projected population growth, urban development, industrial expansion, and other growth factors influencing increased demand for electric energy and the basis for such projections.

(d) The commission shall establish and every electric utility shall utilize a reporting methodology for preparation of the forecasts of future load and resources.

(e) The commission shall review and evaluate the electric utilities' forecast of load and resources and any public comment on population growth estimates prepared by Bureau of Business Research, University of Texas at Austin.

(f) Within 12 months after the receipt of the reports required in Subsection (b) of this section, the commission shall hold a public hearing and subsequently issue a final report to the govenor and notify every electric utility of the commission's electric forecast for that utility. The commission shall consider its electric forecast in all certification proceedings covering new generation plant.

the time of his request shall be refunded to the consumer or user if the meter or measuring device is found unreasonably defective or incorrect to the substantial disadvantage of the consumer or user. If the consumer's request is made at a time beyond the period of presumed accuracy fixed by the regulatory authority since the last such test of the same meter or measuring device, the utility shall make the test without charge to the consumer or user.

ARTICLE VI. PROCEEDINGS BEFORE THE REGULATORY AUTHORITY

Sec. 37. Subject to the provisions of this Act, the commission is hereby vested with all authority and power of the State of Texas to insure compliance with the obligations of public utilities in this Act. For this purpose the regulatory authority is empowered to fix and regulate rates of public utilities, including rules and regulations for determining the classification of customers and services and for determining the applicability of rates. No rule or order of the regulatory authority shall be in conflict with the rulings of any federal regulatory body.

Sec. 38. It shall be the duty of the regulatory authority to insure that every rate made, demanded, or received by any public utility, or by any two or more public utilities jointly, shall be just and reasonable. Rates shall not be unreasonably preferential, prejudicial, or discriminatory, but shall be sufficient, equitable, and consistent in application to each class of consumers. For ratemaking purposes, the commission may treat two or more municipalities served by a public utility as a single class wherever it deems such treatment to be appropriate.

Sec. 39. (a) In fixing the rates of a public utility the regulatory authority shall fix its overall revenues at a level which will permit such utility a reasonable opportunity to earn a reasonable return on its invested capital used and useful in rendering service to the public over and above its reasonable and necessary operating expenses.

(b) **In fixing a reasonable return on invested capital, the regulatory authority shall consider, in addition to other applicable factors, efforts to comply with the statewide energy plan, the efforts and achievements of such utility in the conservation of resources,** the quality of the utility's services, **the efficiency of the utility's operations,** and the quality of the utility's management.

Sec. 40. In any proceeding involving any proposed change of rates, the burden of proof to show that the proposed change, if proposed by the utility, or that the exising rate, if it is proposed to reduce the rate, is just and reasonable shall be on the public utility.

Sec. 41. The components of invested capital and net income shall be determined according to the following rules:

Sec. 46. No public utility may, directly or indirectly, by any device whatsoever or in any manner, charge, demand, collect, or receive from any person a greater or less compensation for any service rendered or to be rendered by the utility than that prescribed in the schedule of rates of the public utility applicable thereto when filed in the manner provided in this Act, nor may any person knowingly receive or accept any service from a public utility for a compensation greater or less than that prescribed in the schedules, provided that all rates being charged and collected by a public utility upon the effective date of this Act may be continued until schedules are filed. Nothing in this Act shall prevent a cooperative corporation from returning to its members the whole, or any part of, the net earnings resulting from its operations in proportion to their purchases from or through the corporation.

Sec. 47. No public utility may discriminate against any person or corporation that sells or leases equipment or performs services in competition with the public utility, nor may any public utility engage in any other practice that tends to restrict or impair such competition.

Sec. 48. No payments made in lieu of taxes by a public utility to the municipality by which it is owned may be considered an expense of operation for the purpose of determining, fixing, or regulating the rates to be charged for the provision of utility service to a school district or hospital district. No rates received by a public utility from a school district or hospital district may be used to make or to cover the cost of making payments in lieu of taxes to the municipality by which the public utility is owned.

ARTICLE VII. CERTIFICATES OF CONVENIENCE AND NECESSITY

Sec. 49. For the purposes of this article only: (a) "Retail public utility" means any person, corporation, water supply or sewer service corporation, municipality, political subdivision or agency, or cooperative corporation, now or hereafter operating, maintaining, or controlling in Texas facilities for providing retail utility service.

(b) For the purposes of this article only, "public utility" includes a water supply or sewer service corporation.

Sec. 50. Beginning one year after the effective date of this Act, unless otherwise specified:

(1) No public utility may in any way render service directly or indirectly to the public under any franchise or permit without first having obtained from the commission a certificate that the present or future public convenience and necessity require or will require such installation, operation, or extension.

(2) Except as otherwise provided in this article no retail public utility may furnish, make available, render, or extend retail public utility service to any area to which retail utility service is being lawfully furnished by another retail

recent forecast.

(2) Certificates of convenience and necessity shall be granted on a nondiscriminatory basis if the commission finds that the proposed new plant is required under the service area forecast, that it is the best and most economical choice of technology for that service area as compatible with the commission's forecast, and that conservation and alternative energy sources cannot meet the need.

Sec. 55. (a) If an area has been or shall be included within the boundaries of a city, town, or village as the result of annexation, incorporation, or otherwise, all public utilities certified or entitled to certification under this Act to provide service or operate facilities in such area prior to the inclusion shall have the right to continue and extend service in its area of public convenience and necessity within the annexed or incorporated area, pursuant to the rights granted by its certificate and this Act.

(b) Notwithstanding any other provision of law, a public utility shall have the right to continue and extend service within its area of public convenience and necessity and to utilize the roads, streets, highways, alleys, and public property for the purpose of furnishing such retail utility service, subject to the authority of the governing body of a municipality to require any public utility, at its own expense, to relocate its facilities to permit the widening or straightening of streets by giving to the public utility 30 days' notice and specifying the new location for the facilities along the right-of-way of the street or streets.

(c) This section may not be construed as limiting the power of cities, towns, and villages to incorporate or extend their boundaries by annexation, nor may this section be construed as prohibiting any city or town from levying taxes and other special charges for the use of the streets as are authorized by Section 182.025, Tax Code.

(d) Where a municipal corporation offers retail electric utility service in a city of more than 135,000 population located in a county of more than 1,500,000 population according to the last federal decennial census, the commission shall singly certificate areas within the corporate limits of such municipality where more than one electric utility provides electric utility service within such corporate limits. In singly certificating such areas, the commission shall preserve the respective electric utilities' rights to serve the customers such electric utilities are serving on the effective date of this subsection. Provided, however, the foregoing shall not apply to customers served, at least partially, by a nominal 69,000 volts system, who have given notice of termination to the utility servicing that customer prior to the effective date of this subsection.

Sec. 56. Contracts between retail public utilities designating areas to be

C. BIEDRZYCKI

Substantive Rules

DECEMBER 1984 EDITION

12-84 Revised

Public Utility Commission
of Texas

7800 Shoal Creek Boulevard • Suite 450N • Austin, Texas 78757 • 512/458-0100

PUBLIC UTILITY COMMISSION OF TEXAS

GENERAL REQUIREMENTS

§23.1 Purpose and Scope of Rules.

This chapter is intended to establish a comprehensive regulatory system to assure rates, operations, and services which are just and reasonable to the consumer and the utilities and to establish the rights and responsibilities of both the utility and consumer. This chapter shall be given a fair and impartial construction to obtain these objectives and shall be applied uniformly regardless of race, color, creed, sex, or marital status.

§23.2 Severability Clause.

The adoption of this chapter will in no way preclude the Public Utility Commission from altering or amending them in whole or in part, or from requiring any other or additional service, equipment, facility, or standard, either upon complaint or upon its own motion or upon application of any utility. Furthermore, this chapter will not relieve in any way a utility or customer from any of its duties under the laws of this state or the United States. If any provision of this chapter is held invalid, such invalidity shall not affect other provisions or applications of this chapter which can be given effect without the invalid provision or application, and to this end, the provisions of this chapter are declared to be severable. This chapter shall not be construed so as to enlarge, diminish, modify, or alter the jurisdiction, powers, or authority of the commission or the substantive rights of any person. The commission may make exceptions to this chapter for good cause.

§23.3 Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise:

Act — The Public Utility Regulatory Act, Texas Civil Statutes, Article 1446c.

Affected person — Any public utility affected by any action of the regulatory authority, any person, partnership, cooperative corporation, corporation, or any combination thereof, whose utility service or rates are affected by any proceeding before the regulatory authority, or any person, partnership, cooperative corporation, corporation, or any combination thereof, that is a competitor of a public utility with respect to any service performed by the utility or that desires to enter into competition.

Affiliated interest — The definition of affiliated interest is that definition given in the Public Utility Regulatory Act, Article I, §3(i).

Agency — Any state board, commission, department, or officer having statewide jurisdiction (other than an agency wholly financed by federal funds, the legislature, the courts, the Industrial Accident Board, and institutions for higher education) which makes rules or determines contested cases.

Allocations — For all utilities, the division of plant, revenues, expenses, taxes, and reserves between states, between municipalities, or between municipalities and unincorporated areas, where such items are used for providing public utility service in a state or municipality or for a municipality and unincorporated areas.

Applicant — Any person, partnership, cooperative corporation, corporation, or any combination thereof requesting affirmative service or action from the utility.

Base rate — The portion of a consumer's utility bill which is attributable to a set level of expenses fixed during rate proceedings. This would include a cost factor specifically identified as fuel expense.

Bulletin — The commission's unofficial reporter, published once monthly. Final orders of significant interest are printed in full with headnotes, while less significant material appears as memorandum citations.

Commission — The Public Utility Commission of Texas.

Class of service or customer class — A description of utility service provided to a customer which denotes such characteristics as nature of use or type of rate. Classes may be further subdivided into grades denoting quality of service.

Contested proceeding or case — A proceeding including, but not restricted to, rate making and licensing in which the legal rights, duties, or privileges of a party are to be determined by the commission after an opportunity for adjudicative hearing.

Cooperative corporation — Any telephone or electric cooperative corporation organized and operating under the Telephone Cooperative Act (Texas Civil Statutes, Article 1528c) or the Electric Cooperative Corporation Act (Texas Civil Statutes, Article 1528b).

Corporation — Any corporation, joint-stock company, or association, domestic or foreign, and its lessees, assignees, trustees, receivers, or other successors in interest, having any of the powers or privileges of corporations not possessed by individuals or partnerships, but shall not include municipal corporations unless expressly provided otherwise in the Public Utility Regulatory Act.

Customer — Any person, firm, partnership, corporation, municipality, cooperative, organization, governmental agency, etc., provided with services by any utility.

Economy energy — Energy produced and supplied from a more economical source by one utility substituted for that being produced or capable of being produced from a less economical source by another utility and scheduled on an availability basis.

Energy Efficiency - Management of energy resources through efficacy in the utilization of electrical energy through: end-user conservation (a single device, measure, or practice, or a grouping thereof, to save kwh or kw and that can be measured at the customer meter); utility-controlled options such as optimization of existing and planned generation, transmission, and distribution facilities through direct load management (reduction in peak demand on an electric utility system by direct control of electric devices), cogeneration (reduction in additions to electric utility planned generation expansion as a result of using firm and reliable capacity from an industrial company), peak shaving (reduction in peak demand on an electric utility system by the storage of energy produced during an off-peak period and then utilizing it to serve loads during the peak period), small power production (reduction in additions to electric utility planned generation additions by the installation of dependable, long-life generating plants utilizing direct conversion of renewable resources of electric energy), power plant productivity improvement (reduction in additions to electric utility planned generation expansion as a result of improvements in the productivity of existing or new generating units), and power plant efficiency improvement (reduction in the utilization of natural resources in their conversion to electrical energy as a result of improvements in the efficiency of existing and new generating units); and optimumal conversion of renewable resources to electrical energy.

Facilities — All the plant and equipment of a public utility, including all tangible and intangible real and personal property without limitation, and any and all means and instrumentalities in any manner owned, operated, leased, licensed, used, controlled, furnished, or supplied for, by, or in connection with the business of any public utility, including any construction work in progress allowed by the commission.

Hearing — Any proceeding based on an application, petition, complaint, or motion.

License — The whole or part of any commission permit, certificate, approval, registration, or similar form of permission required by law.

Licensing — The commission process respecting the granting, denial, renewal, revocation, suspension, annulment, withdrawal, or amendment of a license.

Municipality — A city, incorporated village, or town, existing, created, or organized under the general, home rule, or special laws of the state.

Municipally owned utility — Any utility owned, operated, and controlled by a municipality or by a nonprofit corporation whose directors are appointed by one or more municipalities.

Nonrulemaking proceeding — A proceeding other than rulemaking proceeding, and other than proceedings concerning exceptions to rules. This definition includes both contested and uncontested proceedings.

Order — The whole or part of the final disposition, whether affirmative, negative, injunctive, or declaratory in form, of the commission in a matter other than rulemaking but including issuance of "certificates of convenience and necessity" and rate setting.

Party — Each person or agency named or admitted as a party.

Permanent installation — Any installation that is constructed or placed on and permanently affixed to a foundation, and which is, or will be, used or occupied on a permanent full-time basis. A manufactured home or prefabricated structure shall qualify as a permanent installation only if it is installed on a foundation system according to regulations of the Texas Department of Labor and Standards or is otherwise impractical to move and has the wheels, axles, and hitch or towing device removed, and if it is connected to a permanent water and sewer system.

Person — Any natural person, partnership, municipal corporation, cooperative corporation, corporation, association, governmental subdivision, or public or private organization of any character other than an agency.

Pleading — A written allegation by the parties of their respective claims. Pleadings may take the form of applications, petitions, protests, exceptions, replies, motions, and/or answers.

Power cost recovery factor — A charge or credit that reflects an increase or decrease in purchased power costs not in base rates.

Premises — A tract of land or real estate including buildings and other appurtenances thereon.

Proceeding — Any hearing, investigation, inquiry, or other fact-finding or decision-making procedure, including the denial of relief or the dismissal of a complaint. It may be rulemaking or nonrulemaking; rate setting or non-rate setting.

(ii) unamortized investment tax credit to the extent allowed by the Internal Revenue Code;
(iii) contingency and/or property insurance reserves;
(iv) contributions in aid of construction;
(v) customer deposits and other sources of cost-free capital;

(D) construction work in progress. The inclusion of construction work in progress is an exceptional form of rate relief. Under ordinary circumstances the rate base shall consist only of those items which are used and useful in providing service to the public. Under exceptional circumstances, the commission will include construction work in progress in rate base to the extent that the utility has proven that:

(i) the inclusion is necessary to the financial integrity of the utility; and
(ii) major projects under construction have been efficiently and prudently planned and managed. However, construction work in progress shall not be allowed for any portion of a major project which the utility has failed to prove was efficiently and prudently planned and managed.

§23.22 Energy Efficiency Plan

(a) All electric utilities serving more than 20,000 customers shall file energy efficiency plans consistent with the provisions of this section and the definition of energy efficiency. Those who provide wholesale service must comply with all sections of this rule except subsections (b)(5)-(7) of this section.

(b) Each utility shall file with the commission filing clerk three copies of the following:

(1) An initial one-year energy efficiency plan for calendar year 1985, due December 31, 1984. Subsequent energy efficiency plans will be due on odd-numbered years, starting December 31, 1985. A utility may amend or modify its energy efficiency plan as needed. For each program and activity utility-controlled option and end-user conservation program (not including information and demonstration programs), a quantified and verifiable energy efficiency goal for each of the succeeding two years (except in the initial, one-year plan), with an indication of the objectives and expected contribution of each program and option, detailed documentation of all assumptions and criteria employed in the selection, evaluation, and prioritization of the complete set of programs, including the rationale for selecting the chosen set; and, except in the initial plan, an analysis of the extent to which previous goals have been achieved in toto and the relative contribution of each program and option;

(2) a cost-benefit analysis for each existing utility-controlled option, due by December 31, 1984, and on December 31 in odd-numbered years thereafter, and containing:

(A) a description of the option, including the rationale for the program, identification of the target audience if any, and estimated customer penetration rate if applicable;
(B) any cost-benefit analysis performed prior to implementation;
(C) a description of expenditures to date; and
(D) a current cost-benefit analysis;

(3) for each proposed utility-controlled option, a cost-benefit analysis, due by December 31, 1984 and on December 31 in odd-numbered years thereafter, and containing:

(A) a description of the plan;

(B) a projected cost-benefit analysis for participants, nonparticipants, and residents as a whole; and

(C) an implementation schedule;

(4) for each existing end-user conservation program, (including audit programs but not including information and demonstration programs, such as energy hotlines, weatherization clinics, energy efficient demonstration houses, etc.) the following information, due by December 31, 1984 and on December 31 in odd-numbered years thereafter:

(A) description of the program;

(B) kw peak demand reduction and kwh savings per participating customer (specify peak periods assumed) on forms provided by the commission;

(C) total participating customers per year and cumulative for subsequent ten years;

(D) program nonrecurring costs (e.g., customer rebates) per customer and assumed escalation rates;

(E) program recurring costs per customer per year and assumed escalation rates;

(F) detailed documentation of all assumptions employed in calculations in this paragraph; and

(G) other data as requested by commission staff on forms provided by the commission;

(5) for each proposed end-user conservation program (including audit programs but not including information and demonstration programs, such as energy hotlines, weatherization clinics, energy efficient demonstration houses, etc.), the following information, due by December 31, 1984 and on December 31 in odd-numbered years thereafter:

(A) description of the program;

(B) projected kw peak demand reduction and kwh savings per participating customer (specify peak periods assumed);

(C) projected total participating customers per year and cumulative for subsequent 10 years;

(D) projected program non-recurring costs (e.g., customer rebates) per customer and assumed escalation rates;

(E) projected program recurring costs per customer per year and assumed escalation rates;

(F) detailed documentation of all assumptions employed in the calculation of information required by this paragraph; and

(G) other data as requested by commission staff on forms provided by the commission;

(6) at its option, each utility may submit a detailed work plan, describing the planning process to be followed in developing its energy efficiency plan, including the schedule for the implementation of its plan. This work plan would be submitted in advance of the energy efficiency plan, for review by commission staff;

(7) full descriptions of any information/demonstration programs, including rationale, target audience, qualitative assessments of success to date, and program improvement plans, if any, due by December 31, 1984, and on December 31 in odd-numbered years thereafter;

(8) each plan shall also contain a detailed description of the specific accounts to be used and the cost-accounting system to be employed in order

to ensure that all costs associated with any individual program or option described are accurately and separately identified.

(c) In the filing of an application for a major rate change or certificate of public convenience and necessity for generation facilities, a utility shall include the following:

(1) the most recent energy efficiency plan;

(2) testimony which shall specifically indicate the extent to which the goals of the utility's energy efficiency plan have been reached as of the date of filing. This testimony shall indicate the status of all programs and studies which are being undertaken pursuant to the energy efficiency goals laid out in subsection (b)(2) of this section and all costs expended and benefits achieved to date; and

(3) Testimony which shall indicate to what extent the utility's achievements through its energy efficiency plan have offset the need for new generating facilities, or permitted the utility to reduce reliance on less efficient generation facilities, as required by the Public Utility Regulatory Act, §54(d)(1) and §54(e)(2).

§23.23 Rate Design (Emergency Adoption, effective July 12, 1984.)

(a) **General.**
In fixing the rates of a public utility, the commission shall fix its overall revenues at a level which will permit such utility a reasonable opportunity to earn a reasonable return on its capital investment used and useful in rendering service to the public over and above its reasonable and necessary operating expenses.

(b) **Electric.**

(1) Rates shall not be unreasonably preferential, prejudicial, or discriminatory, but shall be sufficient, equitable, and consistent in application to each class of customers, taking into consideration the need to conserve energy and resources.

(2) The provisions of this paragraph apply to all investor-owned generating electric utilities. Beginning with the September 1983 billing period of each utility, respectively, no automatic fuel adjustment clause shall be allowed. Any revision of a utility's billings to its customers to allow for the recovery of additional fuel costs may be made only upon public hearing and order of the commission. No later than August 15, 1983, each utility covered by this section shall file with the commission all information necessary to determine an interim fixed fuel factor, effective with its September 1983 billing period. On September 1, 1983, each utility shall file an application for an interim fixed fuel factor. After notice and hearing, the commission shall set such an interim factor. The interim fuel factor shall remain fixed until the utility's next general rate case or commission-ordered reconciliation, whichever occurs first. The monthly interim fuel factor shall be determined by dividing the actual, unadjusted fuel costs by actual, unadjusted sales for the 12-month period ending June 30, 1983.

(A) All fuel costs shall be reviewed, and may be redetermined, at the time of the utility's general rate case. All allowed fuel costs, including, if approved, a reconciliation of over- or under-recovery of fuel costs, shall be recovered through the energy portion of the utility's base rates.

STATE OF MICHIGAN

COMMISSIONERS
Eric J. Schneidewind
Edwyna G. Anderson
Matthew E. McLogan

JAMES J. BLANCHARD, Governor
DEPARTMENT OF COMMERCE
Doug Ross, Director
~~[illegible]~~

PUBLIC SERVICE COMMISSION
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

May 31, 1985

Hon. Don Nickles, Chairman
Subcommittee on Energy Regulation
and Conservation
Energy & Natural Resources Committee
U. S. Senate
Washington, D. C. 20510

Dear Senator Nickles:

On behalf of the Michigan Public Service Commission, I want to thank you for the opportunity to provide additional information for your Subcommittee's use in reviewing S.410.

Enclosed are our responses to your questionnaire dated May 13, 1985. Please feel free to call upon me or my staff for any assistance we can provide.

Again, the MPSC wishes to reaffirm its request that your Subcommittee find a way to allow those states that wish to proceed with CACS to do so.

Thank you again for your consideration.

Sincerely,

Matthew E. McLogan

Matthew E. McLogan
Commissioner

MM:jb
Enc.

UNITED STATES SENATE
Subcommittee on Energy Regulation and Conservation

RESPONSES OF COMMISSIONER MATTHEW E. McLOGAN
ON BEHALF OF THE MICHIGAN PUBLIC SERVICE COMMISSION
TO QUESTIONS RE: S.410

Q. Would commercial audits continue in Michigan if the Federal law
repealed?

A. Probably not unless and until appropriate state legislation is
perhaps not even then. The utilities offering Commercial and Ap
Conservation Service (CACS) energy audits now are concerned abou
the program during any period of uncertainty. As evidence of th
seriousness of that concern, I have included as Appendix A a cop
letter (including comments and affidavits) sent to you from Cons
Company, The Detroit Edison Company, Indiana & Michigan Electric
Michigan Consolidated Gas Company, Michigan Gas Utilities Compan
Power Company and Southeastern Michigan Gas Company.

In the event that Title VII of the National Energy Conservation
(NECPA) is repealed, the utilities listed above would most like
promotion of CACS and modify contracts with auditing firms to de
number of audits expected, thereby causing layoffs in the audit
force and depriving Michigan businesses of an important service.

The major reason the utilities are not likely to proceed with th
the event of repeal is their concern about vulnerability to ant
complaints. A discussion of the antitrust problem can be found
and 9 of this document and in Appendix A, Attachment B.

Q. In your opinion, must the utilities do the audits?

A. It is in the public interest to have the utilities offer commercial energy audits. Utilities need not utilize direct company employees to conduct the energy audits. In fact, four out of the seven Michigan utilities offering CACS subcontract their audit work.

Utilities are uniquely positioned to maximize the benefit of a commercial energy audit service to potential users of the service and to the population as a whole. Benefits of utility oversight include:

1. Utilities can identify facilities (high energy users) most in need of the service through a review of consumption data. These customers can then be contacted individually to discuss their need for an energy audit. In addition, utilities can monitor post-audit consumption changes and provide additional follow-up if needed.

2. Utilities have unique access to customers via their monthly energy bills. Because of the existence of their continually updated customer address lists, it is relatively inexpensive for utilities to reach large numbers of potential users of CACS.

3. Because utilities can generate a relatively large volume of audit requests, they are able to write contracts with private audit firms to do "batches" of audits. Because contractors can bid on such "batches" rather than generating individual audit requests on their own, they can offer audits at a lower price than would otherwise be possible. As a result, the cost to the end-user is kept down and the service is more accessible to small businesses.

4. The importance of keeping the cost down cannot be overemphasized. The Michigan Commercial Energy Audit Service Pilot Project found that although businesses were very interested in audit services, they would be willing to pay an average of only $163 for them.

Similarly, in its April 1985 publication, Commercial Energy Audits, The Illinois Survey - Attitudes and Opinions from the Illinois Business Community, the Illinois Department of Energy and Natural Resources found that in spite of "a significant demand for commercial energy audits in Illinois... Over 50 percent of businesses with a high audit demand report that an audit price of $100 is too expensive." They found that "audit demand rates are strongly affected by audit price."

The authors of NECPA, Title VII, clearly understood the need for keeping audit fees down when they added the $15 per unit cap on fees for apartment buildings.

If small businesses and non-profit agencies were willing to pay the necessarily higher fees charged by private sector consultants, there might be less need for utilities to be active in promoting energy efficiency through audit services. However, such is not the case.

5. Utilities are not trying to sell energy conservation products. Therefore, they are much more likely to provide an unbiased comparison of savings' potential of several different measures than are their only real competitors in the low-cost energy audit market. These competitors are suppliers of conservation products or services who offer free or low-cost energy audits as a marketing tool for their products or services.

6. If a customer applies to a lender for a conservation loan and uses a utility audit report for backup, the lender is likely to view the utility estimate as more credible than a savings' estimate from a product supplier due to the conflict of interest inherent in the supplier's estimate. If, as one commenter suggested, utility audits are affected by a conflict created by a desire to sell more energy, the major "negative" impact would be that their estimates of energy savings are too conservative (in order to discourage action). For lenders, however, this tendency (if it exists) would provide extra security that the savings estimated are really achievable and the measures would be a good investment.

7. Demographic data from audits, when aggregated, is extremely useful in improving the accuracy of energy demand forecasts. Accurate forecasts of how much energy will be needed by a state or the nation, and when, can prevent overbuilding of power plants and assist in maintaining a reliable gas supply.

   This kind of data, which is notoriously lacking for the commercial sector at this time, would be unavailable if utility audit services were cancelled.

   The more accurately regulators and utility companies can predict future energy needs, the easier it is to keep rates down. Data such as that made available through utility operation of the CACS program can be instrumental in improving forecasting accuracy. It does not require too much of a leap to say that the CACS program, if operated by utilities, can help keep general utility rates down.

   In addition, utilities and regulators can learn more about the needs and priorities of small business customers through the CACS program. This could aid us in designing rates to assist those same customers.

8. Because of the broad coverage of utility service areas, utility mass marketing of energy audit services will help raise awareness among business operators that there is money to be saved by improving energy efficiency.

   We suspect that one of the reasons small businesses won't pay much for energy audit services is that they are very skeptical about the potential for savings through energy conservation. If utility audits can convince customers that efforts to improve energy efficiency will have quick paybacks, it should follow that there will be increased utilization of consultants, contractors and others to design, install and maintain energy efficient systems and facilities.

Q. If you were assured that 1500 small businesses in Michigan were able to supply the energy conservation services needed to CACS-eligible buildings, would you take that burden off the utilities and consequently the ratepayers?

A. This question makes several assumptions which are erroneous.

1. "Burden to ratepayers" - The CACS program does not require ratepayer subsidy for audits. The only required subsidy item is for program announcements. Some might argue that the $15 per unit limit for apartments requires ratepayer subsidy. Although that limit does hamper the design of a logical pricing structure, the Michigan Public Service Commission (MPSC) order requires the difference, if any, to be picked up not by ratepayers but by non-apartment end-users of the CACS service or by utility shareholders. As the program is designed in Michigan, the average residential customer with both gas and electric service from a covered utility would pay a maximum of 06.5¢ per year for CACS costs. "Burden" is much too strong a word to describe such an insignificant level of subsidy.

2. "Burden to utilities" - The assumption that improving the quality of the service they provide to commercial customers is a burden to utilities is not self-evident. It is a normal function in our society for businesses that sell a product to service it. This service can take the form of assisting customers in the use or maintenance of the product or repairing it if problems develop.

Such services may be "free" or fee-based. The availability of such services from suppliers does not preclude others from successfully offering competing repair or maintenance services. Examples of this are seen everywhere. Two specific examples are: (a) major retailing chains such as Sears, Roebuck and Company selling and servicing appliances in peaceful coexistence with numerous small repair and maintenance shops, and (b) automobile dealers maintaining and repairing the cars they sell in competition with independent mechanics.

The assumption by some contractors that because utilities are regulated they should not be permitted to assist their customers in the efficient use of energy is fallacious. It is the right and duty of utilities to offer such assistance. In the past "boom years" the need for energy was growing so fast that many utilities had all they could do just to connect new customers and ensure reliability of service to existing ones. Assisting customers in the ongoing use of energy "took a back seat." Now, however, due to the stabilization in the rate of growth for energy and the dramatic increases in energy costs in recent years, utilities must put more emphasis on conservation and other secondary services such as energy audits in order to ensure equal access to electricity and natural gas.

Benefits to the utilities for offering such services include:

a. Improved customer relations,
b. More constant, predictable and cost-effective load management - fewer peaks and valleys, and
c. Retention of existing customers whose long-term viability is improved through reduction in operating and production costs.

3. There is no way that 1500 small businesses are available to provide energy audits to CACS-eligible customers in Michigan. This is true for the following reasons:

   a. Most consulting engineering firms are not interested in doing audits for relatively small (4,000 Kwh - 1000 therm/month), simply-constructed buildings. Such firms most frequently target large commercial or industrial operations with complex energy systems and processes. Their expertise is wasted on simple buildings and small customers will not (cannot) pay the fees that are commensurate with such specialized training. In Michigan, we received no comments from consulting engineers on our draft CACS plan although notices went out to The Consulting Engineers Council of Michigan as well as individual engineering firms.

   b. Most firms offering free or low cost energy audits are product suppliers doing a "walk-through" preliminary to a sales pitch for products or services the firm sells. An audit with such a limited focus is not the equivalent of the more objective CACS energy audit. These firms should be excluded from performing CACS audits due to the conflict of interest inherent in making recommendations for their own products. It is ironic that such firms think they have a clear right to offer energy audits as a preliminary to their service while denying the utilities the right to offer follow-up services.

   Absent CACS, small businesses and non-profit agencies which make up 75-90% of the utilities' commercial customers, will have limited access to objective energy audits.

Q. At the hearing, conflicting positions were taken as to whether repeal of CACS would affect a state's ability to authorize utility involvement in energy conservation. Could you please provide a more detailed explanation of your position and include any legal analysis supporting your position, such as cases against your own state program and how the courts have ruled?

A. In Case No. 83CV1080DT, the Federal District Court for the Eastern District of Michigan entered two orders (See Appendix B attached) dismissing antitrust actions brought by private firms against utilities engaged in providing energy audits pursuant to NECPA and the Michigan Residential Conservation Service (MRCS) program. An examination of the first order shows numerous references to the intent of Congress as expressed in NECPA as the grounds for decision. While the order also relies on an alternative state law ground, it is not possible to ascertain whether the dismissal before trial could have been obtained absent NECPA. However, since antitrust litigation is very expensive and time consuming, any legislative action which deprives utilities offering energy audits of a strong argument for dismissal of antitrust suits prior to trial on the merits must be viewed as a negative development.

Another significant legal factor in Michigan is the lack of any specific mandate for utilities to offer energy audit programs for commercial structures. In recent hearings on competition by utilities in energy conservation before the U.S. Senate Committee on Small Business, the Director of the Federal Trade Commission's Bureau of Competition stated, "Particularly where the state statute is silent on the cross-subsidy issue, there is potential for law enforcement action under the traditional doctrine of predation if a cross-subsidy enables the utility to price below marginal cost and harm competition." Absent both NECPA and specific mandate from the Michigan Legislature, the seven CACS-covered utilities believe they would be subjected to unreasonable antitrust risk in providing energy audits to commercial structures. Recent U.S. Supreme Court decisions such as Cantor v The Detroit Edison Company, 49 LEd 2d 1141 (1976) and Community Communications Company v City of Boulder, 455 US 40 (1982) have shown that the "state action" defense to antitrust claims is fraught with technicality.

Even if the Michigan Legislature acts promptly to fill the void, no assurance exists that such legislation would address the technical elements of the state action defense with sufficient clarity to replace the antitrust immunity presently provided to utilities operating the CACS program under NECPA.

The Michigan Public Service Commission wishes to reaffirm its request that the Senate find a way to allow those states that wish to proceed with CACS to do so with the full protection of federal law.

Q. What parts of the Act do you recommend for retention and why?

A. The simplest answer we can offer is that we recommend retaining Title VII of NECPA in its entirety. However, for your convenience in developing possible compromises to CACS repeal, section by section comments are provided below.

TITLE VII - ENERGY CONSERVATION FOR COMMERCIAL BUILDINGS AND MULTIFAMILY DWELLINGS

PART I - GENERAL PROVISIONS

SEC. 710. DEFINITIONS

We would support changes to allow states more flexibility in determining:

1. Which customers should be eligible for the service (including revised definitions of "commercial building" and "multifamily dwelling"),

2. Which "energy efficient improvements" and "commercial energy conservation measures" should be included and how they are defined, and

3. How the "energy audit" is designed and delivered.

These changes would address the concerns of states that claim the program design does not meet the needs of their citizens, while still maintaining the congressional message that it is important to improve the energy efficiency of the commercial and multifamily sectors.

SEC. 711. COVERAGE

We recommend retention of the mandate for utilities with annual sales of 750 million kilowatt hours or 10 billion cubic feet of gas to offer the services. This requirement is reasonable because it provides for services to be made available to the majority of utility customers in the country (approximately 96% in Michigan) while allowing small utilities for whom the program might be too costly to be exempt.

We could support a change to incorporate a more liberal exemption policy for states or which would allow states to develop an alternative plan and still be in compliance with the objectives of NECPA. These changes would provide responsiveness to state concerns about program design, while retaining the emphasis on national energy efficiency. Retention of the mandate will also provide protection for utilities who have proceeded in good faith with program development and implementation.

SEC. 712. RULES OF SECRETARY FOR SUBMISSION AND APPROVAL OF PLANS

We recommend retention of this section. Any changes appropriate in order to maintain consistency with changes to other sections should be added.

Although it would be possible to delegate all program implementation to the states and remove the U.S. Department of Energy (DOE) from the process, such an action would be viewed by most people as a decision by Congress to disassociate the federal government from the efforts to achieve national energy independence. We doubt that such a message is in the public interest.

PART 2 - ENERGY CONSERVATION PLANS

SEC. 721. PROCEDURES FOR SUBMISSION AND APPROVAL OF STATE ENERGY CONSERVATION PLANS FOR COMMERCIAL BUILDINGS AND MULTIFAMILY DWELLINGS.

We recommend the retention of this section with the provision that if the Act is modified, any plan that was approved by DOE prior to such change shall still be determined to be in compliance with NECPA and the DOE Final Rules. Naturally, states wishing to modify previously approved plans to take advantage of changes in the law should be free to do so.

This would avoid disruption to programs that are already underway and aid in the smooth implementation of revised statutory requirements.

SEC. 722. REQUIREMENTS FOR STATE PLANS FOR REGULATED UTILITIES.

We recommend the retention of this section with the same provisions that apply for Section 721.

SEC. 723. PLAN REQUIREMENTS FOR NONREGULATED UTILITIES AND BUILDING HEATING SUPPLIERS.

No position.

PART 3 - UTILITY PROGRAMS

Sec. 731. UTILITY PROGRAMS

We would support changes to allow states more flexibility in determining:

1. The form and timing of program announcements,
2. Conditions placed upon the eligibility of owners of multifamily dwellings for receiving an energy audit,
3. Length of time that records of audits must be kept and the availability of same to "subsequent eligible customers",
4. Conditions under which a program energy audit may be performed on a previously audited building, and
5. The cost of the audit service to the end users.

In addition, we would support a change to allow the state regulatory authority to determine the proper treatment of all utility program expenses including program information costs.

These changes would be responsive to the concerns of those states that believe the program design does not meet the needs of their citizens, without removing congressional support for the importance of national energy efficiency and independence.

SEC. 732. BUILDING HEATING SUPPLIER PROGRAM.

No Position.

PART 4 - FEDERAL IMPLEMENTATION

SEC. 741. FEDERAL STANDBY AUTHORITY.

We recommend no change to this section for the reasons mentioned under Sec. 712. However, we would not oppose a compromise which delegated implementation enforcement to the states.

Q. Similarly, the Department of Energy has suggested that the RCS legal authority expires on January 1, 1985. How would this expiration affect the authorization under state law for RCS programs? That is, in your view, are state programs more likely to be challenged and struck down by court suits without the Federal authority?

A. As we read the law on this issue, the following requirements expire as of January 1, 1985:

1. Requirement for utilities to mass mail RCS program announcements to all eligible customers every two years,
2. Requirement to send program announcements to all new residential customers within 60 days of service start-up, and
3. Requirement for home heating suppliers to mass mail RCS program announcements to all eligible customers every two years.

Our legal interpretation, which is shared by many including the Congressional Research Office, Representative John Dingell and others, is that the requirement for utilities to offer RCS audit services remains in place. After January 1, 1985 the states, utilities and home heating suppliers have somewhat more freedom from DOE oversight in continuing the RCS services.

If Congress chooses to repeal the requirements for RCS audits, utilities offering such services under state-authorizing legislation alone would obviously have one less layer of legal protection than they currently have.

One can only speculate about the outcome of a legal challenge to utilities offering audits in compliance with state legislation. Certainly it is possible that utilities could prevail by citing state requirements in a complaint case challenging utility activities under such legislation. It is also quite possible that the courts would be persuaded that, since (if) Congress chose to repeal existing legislation requiring such utility activities, there must be something inherently wrong with them. Given the fact that such a federal mandate had once existed, utilities are potentially more vulnerable in the event of federal repeal than if there never was a federally required program.

Utilities in Michigan have already been subjected to two lawsuits as a result of their compliance with federal and state mandates. There are rumblings that another such complaint is in the works. If Congress finds that it is no longer in the public interest for utilities to offer such services to their customers, the citizens of Michigan will very likely be deprived of them until such time as we find ourselves in another energy crisis. We would prefer to act to prevent such a crisis and fervently hope for the support of Congress in our efforts to do so.

Q. **Small business representatives asserted at the hearing that greater protections were needed against anticompetitive practices by utilities in the energy conservation field. How do you assess this problem?**

A. Our experience has been that the number of contractors who allege a negative impact from utility programs is very small. Those few, however, are very vocal. Some contractors claim that the utilities are taking away their business by offering energy audits. A more accurate description of what is happening is that contractors hear that customers are requesting utility audit services and make the assumption that absent the utility program, those requests would have come to them.

If the demand for audit services in the small business community really is as sensitive to price as the studies mentioned earlier indicate, the most logical assumption is that, absent utility audit services, most small businesses would not request an energy audit from anyone.

The MPSC went to extraordinary lengths to flush out all possible negative program impacts and, in fact, made significant changes to its draft plan as a result of the comments that were received. The DOE Final Rules required that one public hearing be held. We held eight in various locations around the state. Normal MPSC procedures involve placing notices in the major newspapers in the state. That, as well as personal announcements to every person or business it was felt might have a problem with the program, was done. We notified numerous local chambers of commerce, radio and TV stations. After all comments were in, we held a meeting with a group of contractors who had indicated specific concerns on a certain subject. This meeting resulted in further change to the plan. In spite of all of this, neither Mr. Hughes* nor Mr. Reckinger* chose to comment.

Q. How many businesses have complained of it?

A. A total of three private contractors complained about utility anticompetitive practices during the comment period on Michigan's draft CACS plan.

Q. Do you feel that the existing protections in NECPA are adequate? Too strong or too weak?

A. The existing protections in NECPA are adequate and require states to carefully consider anticompetitive practices. However, in passing NECPA, Congress seemed much more concerned with the inherent conflict of energy auditors turning around and selling the devices they recommended to customers.

---

* Michigan contractors who testified at the May 6, 1985 hearing in support of S.410.

Thus, suppliers and installers of conservation measures were appropriately prohibited from participating as RCS auditors. Under the CACS Final Rules, states were required to carefully address this issue and make provisions to ensure that if auditors are allowed to recommend specific suppliers, contractors or lenders no "unfair discrimination" takes place. In Michigan, such recommendations are prohibited.

With close scrutiny, we believe it will be apparent that most private firms offering energy audits for under $200 to small commercial customers are also suppliers of energy-related devices. If they are losing business due to the availability of a more objective audit from a utility (an assumption we do not accept) the benefit to the general public far outweighs the cost to those contractors.

Q. Does your state have legislation to address this problem?

A. Michigan has no specific legislation regarding "utility anticompetitive practices in the energy conservation field." However, The Michigan Antitrust Reform Act (P.A. 274 of 1984) became effective on March 29, 1985. This Act parallels the federal antitrust structure in its basic prohibitions. The interests of contractors and consultants are, therefore, well protected by both federal and state legislation.

APPENDIX A

RECEIVED
MICHIGAN PUBLIC SERVICE CO
MAY 30 1985
COMMISSIONERS OFFICE

May 30, 1985

Honorable Don Nickles - Chairman
Subcommittee on Energy Regulation
and Conservation
Committee on Energy & National Resources
United States Senate
Washington, D.C. 20510

Dear Chairman Nickles:

The Michigan utilities identified below have jointly prepared the attached comments to bring to your attention what we feel are significant and negative impacts of Senate Bill 410, if it is acted upon in its current form. We urge you to bring these comments to the attention of your colleagues in the U.S. Senate in the hope that they will modify this proposed legislation.

Acting under the direction of and in compliance with Federal legislation, i.e., Title VII of the National Energy Conservation Policy Act, Rules of the U.S. Department of Energy, and by order of the Michigan Public Service Commission (Case #U-7900), Michigan utilities have developed and implemented the Commercial and Apartment Conservation Service (CACS) program that is of value to Michigan businesses and property owners. It is our position, as identified in the attached comments, that repeal of CACS would impair our ability to offer CACS energy audits and would increase our exposure to antitrust litigation.

Recognizing that the CACS legislation in its present form may not meet the needs of individual states; yet, also recognizing that energy conservation must be an on-going goal for all segments of our country; we recommend that the CACS legislation be amended rather than repealed, as is currently proposed. We have attached comments that set forth, A) the history and background of this program; B) the concerns regarding antitrust litigation; and C) alternatives to the repeal of CACS. We believe that any one of the amendments identified in our attached comments would enable States and utilities throughout the nation the option to offer conservation programs to commercial customers and would also ensure the continuation of CACS service to Michigan businesses.

Honorable Don Nickles
May 30, 1985
Page Two

Thank you for your consideration of this request. If you or members of the Senate Subcommittee on Energy Regulation and Conservation have questions regarding these comments or need additional information, please contact any of the individuals identified below.

Consumers Power Company, Mr. T.J. Goulish	(517) 788-2111
Detroit Edison Company, Mr. M.M. Murphy	(313) 237-7794
Michigan Consolidated Gas Company, Mr. D.L. Elgas	(313) 256-5759
Michigan Gas Utilities Company, Mr. H.L. Burrington	(313) 242-4100
Southeastern Michigan Gas Company, Mr. D.F. Loxton	(313) 987-7900
Indiana & Michigan Electric Company, Mr. A.N. Olson	(219) 425-2145
Michigan Power Company, Mr. R.P. Fegan, Jr.	(616) 279-5261

Attachments

cc: Members, U.S. Senate Subcommittee on Energy Regulation and Conservation
Senator Carl Levin
Senator D.W. Riegle
Chairperson, E.J. Schneidewind, Michigan Public Service Commission
Commissioner E.G. Anderson, Michigan Public Service Commission
Commissioner M.E. McLogan, Michigan Public Service Commission

Attachment A

History and Background

The genesis of the CACS program was the Energy Security Act of 1980. In January 1981, the Department of Energy issued proposed rules for CACS implementation. In response to the proposed rules, the Michigan Public Service Commission inititated a "Commercial Energy Audit Service" pilot program in 1982 to determine the feasibility of offering energy audits to commercial and industrial customers. The Detroit Edison Company, Consumers Power Company, and Michigan Gas Utilities Company participated in the pilot program. The conclusions derived from the program were that customers desired such a program and the program could be cost-effective.

On October 26, 1983, DOE issued Final Rule 10 CFR, Part 458 (Docket No. CAS-RM-80-125) entitled, "Commercial and Apartment Conservation Service (CACS) Program." Subsequently, the MPSC developed an implementation plan which was approved July 12, 1984. The MPSC then issued an Order in Case No. U-7900 which adopted the state plan.

Attachment B

Concerns Regarding Antitrust Litigation

Recently seven public utilities serving southern Michigan were joined in an antitrust action by two companies in the business of performing commercial and residential energy audits. They sought class certification on the ground that they represented a class of similarly situated businesses. (Control Temp Consultants, Inc. v. The Detroit Edison Company, et al, U.S. District Court, Eastern District of Michigan, Southern Division, No. 83-CV1080DT)

This suit was dismissed on preliminary motion on the ground that the residential energy audit program did not violate federal antitrust laws because such audits are compelled by and done pursuant to federal statute, state statute, and applicable rules and regulations thereunder.

While the dismissal was based on federal and state laws, it refers to the intent of Congress as expressed in NECPA as the basis for decision. Thus, while the order also relied on alternative grounds, it is doubtful whether suit would have been dismissed before trial absent NECPA.

Moreover, the order of dismissal expressly reserves to plaintiffs the right "to file a new complaint raising only antitrust allegations as to alleged conduct of commercial audits and audits of multiple family residences."

As a result of this litigation, the undersigned utilities are ready targets for further antitrust litigation and believe that to continue their commercial energy audit programs without benefit of federal legislation would invite such litigation.

Class action litigation is lengthy and expensive. In addition, if the federal statute were repealed and the companies were to proceed with the program under state authority, the program could be tied up for years with legal challenges.

Attachment C

Alternatives to Repeal of CACS

The following are summary descriptions of possible amendments to existing NECPA Title VII (CACS) legislation. It is felt that any one of these amendments would:

- Ensure that energy conservation remains a central part of national energy policy,
- Enable states and utilities that chose, to proceed with CACS audit activities, and
- Enable states and utilities to offer conservation services specific to their needs.

1. ALTERNATIVE STATE PLANS: Amend CACS to permit states, to submit alternatives to the State Plans currently specified. This type of amendment is similar to that contained in H.R. 5946, which was introduced in the 98th Congress. The criteria for alternative plans could be as flexible as deemed necessary to enable states/utilities to offer programs or services that they feel are needed.
2. EXEMPTION: Amend CACS to permit states to request that they be exempt from the requirement to develop and implement CACS services. Sec. 722 of the current legislation provides for a partial exemption that could be modified to provide a broader exemption policy.
3. "GRANDFATHER" PROVISION: Amend CACS to effect that the requirement to implement State Plans would be limited to those Plans approved by D.O.E. with subsequent state action (a regulatory order or legislation) prior to January 1, 1985.

AFFIDAVIT

STATE OF MICHIGAN)
) ss. COUNTY OF JACKSON)

Charles F. Brown, having been duly sworn, deposes and says that he is a Vice President of Consumers Power Company; that he has executed the within letter and attachments of Consumers Power Company, for and on behalf of said Company; and that he is authorized to do so; that he has read said letter and attachments and is familiar with the contents thereof; and that the facts therein set forth are true and correct to the best of his knowledge, information and belief, and is familiar with the contents thereof and endorses said comments except Items 1 and 2 of the alternatives to repeal of CACS and supports Item 3 of Attachment C.

C F Brown

Subscribed and sworn before me, this 30th
day of May, 1985, a Notary Public
in and for Jackson County,
Michigan

Judith A. [illegible]
(Signature)
NOTARY PUBLIC
My commission expires June 25, 1988.

AFFIDAVIT

STATE OF MICHIGAN
ss
COUNTY OF WAYNE

J. PHILIP LENIHAN, having been duly sworn, deposes and says that he is Vice President, Marketing and Customer Relations for The Detroit Edison Company; that he has read the letter to Senator Don Nickles dated May 30, 1985 and the three attachments thereto; he endorses said comments except items 1 and 2 of the Alternatives to Repeal of CACS and supports item 3 of Attachment C; and that the facts therein set forth are true and correct to the best of his knowledge, information and belief.

Further affiant sayeth not.

J. PHILIP LENIHAN

Subscribed and sworn to before me
this 30th day of May, 1985.

Karen A. Freidline
Notary Public, County of Macomb - Acting in Wayne County
Karen A. Freidline
My Commission expires January 20, 1987

STATE OF INDIANA)
) SS
COUNTY OF ALLEN)

AFFIDAVIT OF ARTHUR N. OLSON

Arthur N. Olson, being first duly sworn, deposes and says as follows:

1. I am employed by Indiana & Michigan Electric Company (I&M) as Marketing and Customer Services Coordinator. My responsibilities include activities related to the Michigan Commercial and Apartment Conservation Service Plan, which is known as the Michigan Business Energy Efficiency Program.

2. I have read the foregoing letter addressed to Senator Don Nickles and I am authorized to express I&M's support for the comments set forth in the letter and Attachments A and B and support for only Alternative 3, "'Grandfather' Provision", in Attachment C therein as they apply to the State of Michigan.

Further affiant sayeth not.

Arthur N Olson
Arthur N. Olson

Subscribed and sworn to before
me this 30th day of May, 1985.

Patricia C Fasick
Patricia C. Fasick (Notary Public)

I am a resident of Allen County, IN.

My commission expires 7-29-88.

AFFIDAVIT

STATE OF MICHIGAN)
) SS.
COUNTY OF WAYNE)

John E. vonRosen, having been duly sworn, deposes and says that he is a Vice President of Michigan Consolidated Gas Company; that he has read and is familiar with the contents of the attached Comments of Michigan utilities; that he endorses said Comments and the facts therein set forth are true and correct to the best of his knowledge, information and belief.

John E. vonRosen

Subscribed and sworn to before me this 29th day of May, 1985.

Helen Fujawa

HELEN FUJAWA
Notary Public, Wayne County, Michigan
My Commission Expires June 21, 1988

AFFIDAVIT

STATE OF MICHIGAN)
) SS.
COUNTY OF MONROE)

James G. Miller, having been first duly sworn, does depose and say that he is President of Michigan Gas Utilities Company; that he has read and is generally familiar with the attached letter to Senator Nickles and three attachments thereto; that the facts contained therein are true and correct to the best of his knowledge, information and belief; that he has approved the Company's participation in and execution of the comments contained in the letter and three attachments thereto; that he is authorized on behalf of the Company to offer such approval.

Further affiant sayeth not.

James G. Miller
President
Michigan Gas Utilities Company

Subscribed and sworn to before me
this 29th day of May, 1985.

Deborah J. O'Leary
Deborah J. O'Leary
Notary Public, Monroe County, Michigan
My Commission Expires: 11/15/85

AFFIDAVIT OF DAVID A. SWITZER

David A. Switzer, being first duly sworn, deposes and says as follows:

1. I am employed by Michigan Power Company (MPCO) as Marketing and Customer Services Director. My responsibilities include activities related to the Michigan Commercial and Apartment Conservation Service Plan, which is known as the Michigan Business Energy Efficiency Program.

2. I have read the foregoing letter addressed to Senator Don Nickles and I am authorized to express Michigan Power Company's support for the comments set forth in the letter and attachments A&B and support for only alternative 3, "Grandfather Provision", in attachment C, therein as they apply to the State of Michigan.

Further affiant sayeth not.

David A. Switzer
David A. Switzer

Subscribed and sworn to before
me this 20th day of May, 1985

Lois J. Lucas
(Notary Public)

I am a resident of LOIS J. LUCAS
NOTARY PUBLIC, STATE OF OHIO
My commission expires MY COMMISSION EXPIRES [illegible]

AFFIDAVIT

State of Michigan)
ss
County of St. Clair)

Delbert P. Loxton, having been duly sworn, deposes and says that he is Director of Training for the Southeastern Michigan Gas Company; that he has read the letter to Senator Don Nickles dated May 30, 1985, and the three attachments thereto; and that the facts therein set forth are true and correct to the best of his knowledge, information and belief.

Further affiant sayeth not.

Delbert P. Loxton
Delbert P. Loxton

Subscribed and sworn to before me
this 29th day of May, 1985
Margaret M. Burnett
Notary Public
My Commission Expires 12-15-86

APPENDIX B - Part 1

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

CONTROL TEMP CONSULTANTS, INC.,
a Michigan corporation, et al.,

Plaintiffs,

v. Civil No. 83CV1080DT

THE DETROIT EDISON COMPANY,
a Michigan corporation, et al.,

Defendants.
/

RECEIVED
[illegible]
SEP 1 1983
OFFICE OF ENERGY

FILED
SEP 7 [illegible] PM '83
U.S. [illegible]

ORDER

Civ. #83CV1080DT

ORDER

The court having reviewed The Detroit Edison Company's motion to dismiss and the parties' briefs and having heard oral argument on the motion to dismiss, and being otherwise advised in the premises, has determined that:

1. The conduct alleged in counts I and III of plaintiffs' complaint (that defendants have provided below cost residential energy audits and free conservation kits) is compelled by and taken pursuant to a federal statute, the National Energy Conservation Policy Act, 42 U.S.C. § 8201 et seq. (NECPA), a state statute, M.C.L.A. 460.6c, and the applicable federal and state regulations thereunder. Congress, the Michigan Legislature and Michigan Public Service Commission (MPSC) provided for these programs based on the determination that low-priced energy audits were necessary to properly stimulate energy conservation, and despite the recognized fact that low-priced energy audits could have an adverse impact on private firms in the business of providing energy audits. These programs were designed to displace competition with a complex regulatory scheme which actively supervised defendants' activities, and were intended to encourage energy conservation

beyond the degree possible through the market. A holding that the challenged activities violate the antitrust laws would directly conflict with these provisions and stymie the purpose of the federal and state regulations and statutes. Therefore, it is clear that Congress intended that the actions attacked in counts I and III be immune from antitrust challenge, and that the actions are further protected from antitrust challenge under the state action doctrine;

2. Count IV alleges that the defendants are required to hire plaintiffs to perform energy audits under NECPA and/or Michigan law. However, NECPA, 42 U.S.C. § 8201 et seq., expressly grants defendants the discretion to have energy audits performed either by her own employees or by hiring others, such as plaintiffs. Rule XIII of the Michigan Residential Conservation Service (MRCS) program regulations expressly forbids defendants from hiring as auditors persons, like plaintiffs, who also engage in installation of energy conservation measures. Therefore, count IV fails to state a valid claim;

3. As a separate and independent basis for dismissal, plaintiffs' antitrust claims in counts I and III fail to state a claim upon which relief may be granted, because none of the elements required under Section 2 of the Sherman Act is pleaded, and because, additionally, the strict regulatory controls imposed by NECPA and the MRCS program make it impossible for defendants to engage in the kind of control over price which would state a Section 2 violation;

4. Plaintiffs' constitutional allegations in count II likewise fail to state a valid claim since there is a rational basis for the provisions of NECPA and the state plan, and furthermore the provisions are normal police regulations reasonably related to the lawful state purpose of promoting energy conservation;

5. Plaintiffs' allegations in count V fail to state a valid claim, since there is no basis for plaintiffs' claim that the sale of set-back thermostats violates any law.

IT IS, THEREFORE, ORDERED that plaintiffs' complaint be and the same hereby is DISMISSED WITH PREJUDICE, pursuant to Fed. R. Civ. P. 12(b)(6) for failure to state a claim upon which relief may be granted, except that such dismissal shall be without prejudice to plaintiffs' right to file a new complaint raising only antitrust allegations as to the alleged conduct of commercial audits and audits of multiple family residences not covered by the MRCS regulations.

Robert E. DeMascio
United States District Judge

Dated: SEP 2 1983

APPENDIX B - Part 2

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

OFFICE OF THE
ATTORNEY GENE[illegible]
MAR 2[illegible] 1984
PUBLIC [illegible] DIVISION
RECEIVED
83.

CONTROL TEMP CONSULTANTS, INC.,
a Michigan corporation, et al

Plaintiffs

v

Case No. CV 1050 DT

FILED
MAR 16 12 07 PM '84
U.S. [illegible]

THE DETROIT EDISON COMPANY, a
Michigan corporation, et al

Defendants
_______________________________/

JUDGMENT OF DISMISSAL

At a session of said Court, held in the
Federal Building, Detroit, Wayne County,
Michigan, on [illegible]

PRESENT: HONORABLE [illegible]
DISTRICT COURT JUDGE

The Court having reviewed The Detroit Edison Company's Motion to Dismiss and for Summary Judgment regarding plaintiffs' Amended Complaint, joined in by the other defendants, and the briefs of the parties hereto, and having heard oral argument on the Motion, and being otherwise advised in the premises, has determined that:

1. Plaintiffs' antitrust claims in their Amended Complaint continue to fail to state a claim upon which relief may be granted, because plaintiffs have, among other things, failed to plead any facts relating to any of the elements required under Section 2 of the Sherman Act, including a relevant market, monopoly power or a dangerous probability of success in attaining a monopoly, a significant adverse effect on competition, and the effect of the restraint on interstate commerce;

2. These same deficiencies existed in plaintiffs' original Complaint and have not been corrected, resulting in an unjustified waste of time and effort by the parties and this Court; and

3. Plaintiffs have also continued to raise several issues in their Amended Complaint which were dismissed with prejudice by this Court's September 2, 1983 Order regarding plaintiffs' original Complaint;

IT IS, THEREFORE, ORDERED that plaintiffs' Amended Complaint be and the same hereby is DISMISSED WITHOUT PREJUDICE, pursuant to Fed. R. Civ. P. 12(b)(6) for failure to state a claim upon which relief may be granted, except that plaintiffs' nonantitrust claims and other issues disposed of by this Court's September 2, 1983 Order are again DISMISSED WITH PREJUDICE;

IT IS FURTHER ORDERED that, because of plaintiffs' failure in their Amended Complaint to correct the previous deficiencies noted by this Court, if plaintiffs file a second amended complaint, which is also dismissed by this Court, plaintiffs shall be liable for all actual costs and actual attorneys' fees incurred by defendants in this cause from the inception of this action.

Robert E. DeMascio
United States District Judge

APPROVED AS TO FORM:

Paul E. Dufault, Esq.
Robinson and Dufault, PC
Attorneys for Plaintiffs

BY ______ JANET ENGLISH
DEPUTY CLERK

David A. Ettinger (P26537)
Honigman Miller Schwartz and Cohn
Attorneys for The Detroit Edison
Company

ENVIRONMENTAL POLICY INSTITUTE

June 2, 1985

Response to Chairman Don Nickles on the CACS Program

Q...Mr. McDonald, could you rank the importance of the CACS Program to you compared to the RCS, Weatherization, and Low-Income Energy Assistance Programs. Are they more or less important?

A...The Energy Conservation Coalition believes that these Programs are of equal importance because each serves a specific need. Moreover, these programs are intended to compliment each other.

Q...Did the Energy Conservation Coalition not support repeal of CACS last year?

A...The Energy Conservation Coalition did not support repeal of CACS last year. The Energy Conservation Coalition has always supported the CACS Program. The Energy Conservation Coalition supported the original Conservation Service Reform Act of 1984, H.R. 5628, which did not repeal CACS, but the Coalition did not support the final compromise measure which repealed CACS (H.R. 5946).

Q...What is your estimate of the costs and benefits of CACS activities?

A...The Energy Conservation Coalition has not independently calculated the costs and benefits of the CACS Program. However, according to the Department of Energy's "Final Regulatory Impact Analysis" of the CACS Program, July, 1983, the present discounted value of costs of the six-year program would range from $55 to $253 million with a mid case of $135 million and the present discounted value of benefits over the life of the program would range from $5 to $993 million, with a mid case of $194 million. According to DOE's "Draft Preliminary Regulatory Impact Analysis", November, 1982, the total annual costs of implementing the CACS Program would be less than $70 million and the total energy savings would be less than 7,500 barrels of oil equivalent per day (or $77 million per year at $28 per barrel). The Preliminary Anaylysis states that cumulative total costs of the 5-year program would not exceed $350 million and the annual

218 D Street, S.E., Washington, D.C. 20003 (202) 544-2600

energy savings resulting from the program would not be more than 37,500 barrels of oil equivalent per day ($383 million per year at $28 per barrel). The energy would continue for years.

Q...What is the incremental value of a Federal program to stimulate these activities?

A...The energy efficiency audits and resulting retrofits will not occur without a Federal program such as the CACS Program. The constraints to achieving audits and improvements in the multifamily building sector is well documented. The market simply has not significantly penetrated this area. In addition to the energy and dollar savings available through the implementation of the CACS Program, it would provide much needed relief for low-income households occupying a large percentage of multifamily rental housing. Moreover, DOE's Final Regulatory Impact Analysis states that, "in addition to energy and dollar savings, it is also likely that the program will have some indirect benefits, including increased employment in certain sectors, and some positive effects on the environment...such benefits are not incorporated into the calculations of the program's overall benefits and costs." Thus, in an energy, dollar, environmental, employment and low-income assistance context, the CACS Program is extremely valuable.

Respectfully submitted,

Norris McDonald

Norris McDonald
Director
Energy Conservation and
Transportation Project
Environmental Policy Institute

RESPONSE OF THE AMERICAN GAS ASSOCIATION
TO ADDITIONAL QUESTIONS FROM
SUBCOMMITTEE ON ENERGY CONSERVATION AND REGULATION
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ON SENATE BILL S.410
REPEAL OF COMMERCIAL AND APARTMENT CONSERVATION SERVICE

June 3, 1985

QUESTION ONE

Could you please respond to the specific charges made by the small business representatives as highlighted in their enclosed statements?

(A) In Massachusetts, Bay State Gas Company offers for rent or lease conversion burners, boilers and furnaces to commercial and industrial users. As a Bay State flyer says:

> "Bay State Gas will provide the appropriately sized burner for your heating needs and will install it in your boiler or furnace. Once installed, burner maintenance is provided by us at no cost to you. You buy nothing. You install nothing. We do all the work."

Because of Bay State's program, an ASA member in Brockton, Massachusetts, has seen his annual sales of conversion burners drop from 300 to less than 20.

A.G.A. COMMENT: See statement of Bay State Gas Company attached as Exhibit A.

(B) In the Washington, D.C., area, Washington Gas Light Company operates several divisions which are involved in the supply and installation of energy conservation equipment and material for residential, commercial, industrial and institutional users.

Each WGL division, supposedly separate from the parent, operates under the banner of Washington Gas Light. Advertising, equipment, personnel, etc., are shared by the utility and its division. The propriety of such a relationship and the possibility of illegal cross-subsidization is now before the Maryland Public Service Commission because of a complaint filed by local business owners.

A.G.A. COMMENT: See statement of Washington Gas Light Company attached as Exhibit B.

QUESTION TWO

If the CACS program were repealed, how would this affect utility involvement in energy conservation? Please indicate how much the response would vary by utility, and what general patterns of involvement you would expect.

A.G.A. COMMENT: Utility involvement in energy conservation would not be affected significantly if CACS were repealed.

The gas distribution industry has had a long history of significant activity in energy conservation, particularly residential energy conservation. An A.G.A. survey conducted in August 1978 (prior to the enactment of RCS), canvassed 213 gas distribution companies. Of 168 respondents, 87 (52%) provided home energy audits, with 74 (44%) providing audits at no cost and 7 (4%) providing them at some cost. Forty-seven (28%) of the respondents marketed attic insulation, 26 (15%) sold wall insulation and 9 (5%) marketed storm doors and windows. These programs promoted energy conservation to the ultimate benefit of both utility customers and the utilities. Nearly all of these utility programs were initiated without any direct governmental (federal, state or local) mandate. Many of our member companies offered conservation programs that included financing of conservation measures at low or no interest. All of these activities were undertaken prior to the enactment of the RCS mandate. Thus, it is unlikely that the repeal of CACS would affect any of these residential energy conservation activities.

To a lesser degree, gas utilities have also been involved in energy conservation for the commercial sector. The lower level of utility activity in this area is probably attributable to the complexity of the commercial market; i.e., the vast array of building types that are found in the commercial market makes it more difficult for utilities to develop conservation programs for this market. The need to maintain the share of gas sold in the commercial energy market will force gas utilities to increase their conservation activities in the commercial sector. Most of these conservation activites will involve, among other things, the marketing of newer and more energy efficient gas heating and cooling equipment that will offer overall energy savings at a reduced operating cost to commercial customers. This increasing level of conservation activity in the commercial sector has occurred without CACS and will continue in the future even if CACS were repealed.

QUESTION THREE

Currently, is utility involvement in energy conservation being challenged in court and how, in your view, would repeal of the RCS and CACS program have affected the outcome of court cases which have been rendered?

A.G.A. COMMENT: We are not aware of any court cases in which utility involvement in conservation has been challenged successfully.

QUESTION FOUR

Small business representatives asserted at the hearing that protections against anti-competitive practices by utilities in the energy conservation field are inadequate. What is your assessment of this problem? Have there been many complaints by small businesses? How many small businesses are currently retained by utilities to assist in energy conservation services, such as audits and installations? Can you estimate how much new work would be made?

A.G.A. COMMENT: A number of small business groups have complained about "anticompetitive" practices by some utilities when providing conservation services. However, most of the utility conservation practices cited by the small business community are not examples of unfair competition.

Given the broad spectrum of utility conservation practices that the ASA deems to be "anticompetitive," ASA would appear to consider any instance of utility competition with small business as "anticompetitive," particularly if one or more small businesses in a utility's service area are losing some business. Thus, to determine whether utilities are engaging in anticompetitive practices when providing conservation services, Congress must consider a standard for unfair competition other than that provided by the small business community.

The standard for utility competition with small business should instead focus on whether the utility uses ratepayer funds to subsidize its conservation activities. We have seen little evidence that utilities have been engaging in this sort of activity. Moreover, the small business community has not provided any examples of utilities that actually are subsidizing their conservation activities with ratepayer funds. We therefore do not view utility competition with small business in the energy conservation area as a problem. Complaints by the small business community have been directed at utility practices that are fair and competitive.

In response to the third part of the Subcommittee's question, A.G.A. does not know the number of small businesses that utilities are retaining to assist in providing energy conservation services. We do have some information on RCS and CACS based on an informal survey of 44 gas utilities conducted earlier this year. We found that 46 percent of the utilities polled contract out RCS audit services, and 15 percent of the utilities polled both contract out and use in-house personnel to conduct RCS audits. Sixty-two percent of the utilities in our survey do not engage in the sale, installation and financing of RCS program measures. Our survey data on CACS yield similar results. Slightly over 50 percent of the utilities polled expect to contract out completely CACS audit services. Seventy-six percent of the utilities polled do not intend to sell, install or finance CACS program measures. These data, although not conclusive, suggests that utilities do not dominate the energy conservation field and that there are market opportunities available for small business.

Statement By

John D. Sampson

Vice President
Government and Public Relations
Bay State Gas Company
Canton, Massachusetts

Before the

Committee on Energy and Natural Resources

Subcommittee on Energy
Regulation and Conservation

May 30, 1985

EXHIBIT A

Mr. Chairman, in its May 6, 1985 statement to the Subcommittee presented by Thomas Norton regarding S. 410, The American Supply Association (ASA) alleged that its members (wholesalers and distributors of plumbing, heating and cooling products and systems) are being "threatened by unfair and anticompetitive practices by utilities in commercial energy conservation" and cited Bay State Gas Company as a perpetrator of these alleged activities. Despite the fact that ASA presented its comments in an improper forum, I feel compelled on behalf of Bay State Gas Company to correct certain of ASA's misstatements, and I would ask that my comments be entered into the Subcommittee's record of its hearings on S. 410, legislation to repeal the Commercial and Apartment Conservation Service Program (CACS).

Introduction

ASA argues that CACS must authorize the states to protect plumbing and heating equipment wholesalers and dealers from certain practices by gas and electric utilities relating to commercial energy conservation. One of only two such practices it specifically cites in its testimony is Bay State Gas Company's program in which energy-efficient gas equipment is leased to commercial and industrial users.

ASA's allegations with respect to Bay State's program, as well as to the practices of utilities in general, are false. I would like to state the facts with respect to the Bay State Gas program first, and move to the more general allegations from there.

Bay State Gas Commerical-Industrial Lease Program

Altough ASA never describes the scope or operations of Bay State's commercial lease program, it presents an excerpt from our promotional flyer, misinterprets its meaning, and goes on to imply that "because of Bay State's commercial lease program, an ASA member in Brockton, Massachusetts, has seen his annual sales of conversion burners drop from 300 to less than 20."

Contrary to ASA's allegations, Bay State's commercial-industrial equipment lease program actually enhances business opportunities for local plumbing and heating dealers by using advertising and promotion to develop the market for energy-saving gas equipment -- a market that continues to be served by these dealers. Not only does Bay State Gas promote the installation of new equipment, but it also provides necessary financing for the equipment, which continues to be purchased from, and installed by, local plumbing and heating firms.

If, as ASA alleges, one of its members has seen his sales of commercial gas equipment decrease, those sales were won on a competitive basis by another local dealer that offered the consumer a better deal. If ASA members in our region are concerned about competition in the commercial-industrial equipment market, we suggest they look closer to home before blaming Bay State Gas.

ASA also alleges that practices such as Bay State's commercial-industrial lease program are subsidized by ratepayers. This would be true only in the event that the equipment was leased below cost. Customers who lease their equipment from Bay State Gas are receiving no subsidy from gas ratepayers.

General Issues

Notwithstanding the serious error that ASA has made with respect to Bay State's program, I wish to correct several other inaccuracies in the ASA testimony concerning the practices of Bay State and other gas utilities across the nation. Contrary to ASA's allegations, the leasing, installation and servicing of gas equipment and appliances is not based on unfair marketing advantage, and does no more to ensure a continued demand for our product than the activities of any other equipment seller or installer. Additionally, it is in the national interest to ensure continued demand for natural gas as opposed to foreign oil.

Marketing position:

ASA claims that utilities "enjoy a massive marketing advantage through their penetration into every home, office building and factory" but ASA does not explain the nature of this advantage. The comment seems to suggest that utilities can promote and advertise energy-using equipment at lower cost than small businesses.

Utility advertising expenses have become the subject of careful scrutiny by regulatory commissions. Promotional advertising has fallen into disfavor. In Title III of the Public Utility Regulatory Policies Act of 1978, Congress established a federal standard which the states are encouraged to adopt:

> "No gas utility may recover from any person other than the shareholders... any direct or indirect expenditure by such utility for promotional or political advertising..."

After utilities have their income limited by regulators to a fair (but not guaranteed) amount, that income is then further reduced by advertising costs. Small businesses, however, deduct advertising costs as normal operating expenses without having any regulatory authority setting a ceiling on earnings. (Although utilities and small businesses pay similar rates for advertising space, time and production, utilities leasing gas equipment are not allowed to recover these costs by increasing their prices, giving the small business an important marketing advantage.

Demand for energy:

ASA's testimony suggests that it is wrong for Bay State and other utilities to enter into commercial-industrial leasing ventures because these ventures sustain consumers' demand for the product -- energy. This argument flouts logic. A given piece of equipment will use the same amount of energy whether the seller is a small business or a utility. Looking specifically at the leasing of gas equipment by gas utilities, it is a matter of public policy to reduce the nation's consumption of foreign oil. Natural gas is a logical, plentiful and North American substitute for oil, and the installation of highly-efficient gas-fueled equipment is clearly in the American consumer's best interest.

Conclusion

ASA's testimony was inaccurate and misleading with respect to the commercial-industrial marketing practices of Bay State Gas Company and, we believe, with respect to the practices of gas utilities across the country. It is ironic that such testimony should come from an organization that represents the plumbing and heating dealers who historically have benefited in so many ways from their mutually positive and reinforcing relationships with utilities. Bay State Gas has always encouraged and welcomed the efforts of local businesses to promote, sell and install efficient gas equipment, and we will continue to do so.

Statement for the Record of
Washington Gas Light Company
Submitted to
Subcommittee on Energy Regulation and Conservation
of the
Committee on Energy and Natural Resources
U. S. Senate
on
S. 410, to Repeal the Commercial and
Apartment Conservation Service (CACS)
May 6, 1985

Description of Washington Gas Light Company's (WGL) Corporate Structure

WGL is a gas distribution utility serving the metropolitan area of Washington, D.C. Its gas distribution operations are regulated by the Public Service Commissions of the District of Columbia and Maryland and the State Corporation Commission of Virginia. These commissions as well as the Federal Energy Regulatory Commission prescribe the accounting practices that WGL must follow. As a public corporation WGL must keep accounting records which comply with generally accepted accounting principles as certified by independent auditors, and is subject to the regulations of the Securities and Exchange Commission and the New York Stock Exchange.

The retail rates charged for gas utility service are approved after hearings by the above-named public service commissions. Such rates reflect: (a) the allowed return determined by a percentage rate of return applied to the rate base (plant, equipment and working capital) found by the respective agencies to be used and useful to serve gas customers; (b) operating and maintenance expenses to provide gas service, including gas purchase costs; (c) depreciation on the plant and equipment; and (d) local, state and federal taxes, including income taxes on the allowed return. This ratemaking procedure prevents ratepayers from being charged for expenses not incurred in providing gas service.

WGL has several wholly owned subsidiaries engaged in energy-related activities. Frederick Gas Company and Shenandoah Gas Company are gas distribution utilities whose accounting practices and retail rates are regulated by three state commissions. Hampshire Gas Company primarily operates a gas storage facility in West Virginia regulated by the Federal Energy Regulatory Commission and engages in limited exploration and production activities in the Appalachian area. Crab Run Gas Company is engaged in gas exploration and production in parts of Oklahoma, Louisiana and Texas. The accounting records of these subsidiaries are kept separately from the records of WGL.

As discussed more fully below, Davenport Insulation Company, Inc. is a WGL subsidiary in the insulation business. WGL also operates Washington Gas Energy Systems, a separate division engaged in energy-related, non-utility services. This division is divided into three departments: Energy Conservation Systems, Commercial Energy Systems, and Air-Conditioning Systems. The activities of this division and its departments are described in detail below. They are not supported by WGL's utility operations or utility ratepayers.

EXHIBIT B

Davenport Insulation

Davenport Insulation was acquired by Washington Gas in 1977 and represents an investment by WGL shareholders. The books and records of Davenport are kept separate from those of WGL. Its acquisition was not financed by WGL ratepayers. No property of Davenport is included in the rate base of WGL and none of its operating and maintenance costs are included in the regulated cost of service of WGL.

At the time of acquisition, Davenport was primarily involved in insulation supply and installation and has since expanded into storm windows. Its principal market is residential and small- to medium-sized commercial new construction.

While this subsidiary incurred losses during 1978-81, it must be emphasized that those losses were borne solely by WGL shareholders. And, at no time has any risk of this investment been shared by WGL ratepayers. Accordingly, the profits realized by Davenport in 1982-84 were allocated to the WGL shareholders. Strict accounting procedures required by the three public service commissions regulating WGL insure that the costs of Davenport's operations are separately maintained so as to preclude cross-subsidization.

Moreover, advertisements of Davenport Insulation do not state, directly or implicitly, that it is affiliated with WGL. In addition, WGL has not engaged in the promotion of this subsidiary and has not used nor intends to use inserts in monthly gas bills to announce or promote such affiliation or services. In sum, all advertising and promotion activities are initiated, developed and paid for by Davenport.

Washington Gas Energy Systems

Washington Gas Energy Systems is a separate division of WGL. Its activities are divided into three departments: 1) Energy Conservation Systems; 2) Commercial Energy Systems; and 3) Air-Conditioning Systems. A description of each of these departments follows.

Energy Conservation Systems (ECS): ECS was formed in response to the serious interstate gas supply shortage in the 70's, at which time WGL's pipeline suppliers curtailed all of its customers, including WGL. As a consequence, the state commissions which regulate WGL ordered a moratorium on gas hook-ups. Many gas customers, including schools and hospitals were curtailed. New pipeline gas supplies were simply unavailable. WGL, therefore, turned to the promotion of conservation techniques in an effort to alleviate the supply shortage. In that sense, conservation represented an alternative source of supply. ECS was formed in 1975 as a separate division to implement the company's conservation efforts. Its operating and capital costs are kept separate from WGL's utility services and are funded by shareholder funds; the state commissions accounting regulations insure this separation. It has since become a department within the overall Washington Gas Energy Systems division.

ECS is engaged in the promotion, sale and installation of insulation, storm windows and doors, thermal walls and roofing, and ventilation systems. Its main market has been and continues to be existing residential structures with emphasis on improving energy conservation in the home through the use of superior quality materials.

It is important to note that small area contractors are used exclusively by ECS for its installation activities. In the case of insulation, ECS subcontracts with small businesses to supply both the materials and the labor. To ensure the use of high quality materials, storm windows and doors and thermal siding are purchased directly from the manufacturers but local small contractors are used to install these products. Roofing materials and ventilation systems are purchased from local distributors but, again, local small contractors do all of the installation.

Since its inception, ECS activities have actually expanded the size and volume of the conservation supply and installation market. Rather than limiting competition, the ECS division has generated additional business opportunities for many small businesses through the promotion of conservation techniques and through its subcontracting policies. In short, ECS performs a marketing function for its subcontractors.

Advertising for ECS is initiated, developed and paid for by ECS, including newspaper, radio, direct mail, the yellow pages and bill inserts. In the case of the latter, any costs associated with the mailing and insertion of ECS materials are also charged directly to ECS and are not borne by the ratepayers.

ECS does offer financing arrangements for customers that purchase its products. Again, associated credit, accounting and administrative costs are charged directly to the ECS division accounts. The annual percentage rates are competitive with those available on the open market, presently ranging from 12.73 to 16.66%. It is significant to note that, unlike local contractors, the risk of non-payment is borne strictly by ECS. Competing contractors do not bear such a risk since they are paid in full upon contract completion by the customer or the customer's bank which has financed the conservation improvements.

While the customer may utilize his or her gas bill as a convenient means to pay a monthly installment, such payment is first credited to gas service before the balance is applied to the conservation products or services purchased. Moreover, a percentage of the revenues of each ECS contract is used to reimburse WGL for all credit and accounting services that ECS uses in this manner. This reimbursement actually benefits WGL ratepayers because it reduces personnel costs which otherwise would have been paid through utility rates.

Commercial Energy Systems: As in the case of ECS, Commercial Energy Systems (CES) is a department within the WGES division. Administrative and operating costs are charged to CES accounts directly and are not borne by WGL ratepayers. Formed in April 1983 to service the needs of the medium to large commercial, industrial and institutional communities, CES designs and sells total energy management systems. The purpose of CES is to design the most efficient energy system at the lowest cost and best economics for a particular user. Given this purpose, the emphasis is not necessarily on gas equipment. Rather, the emphasis is on component replacement, waste heat recovery, physical plant lay-out, lighting and computerized energy usage controls which are all components of such a system design.

When CES submits a bid for the installation of an energy management system, a thorough engineering review and evaluation is performed of the existing facilities. CES personnel perform these services with the aid of outside consulting engineers. All construction is done exclusively with area contractors.

Once a bid has been accepted, CES subcontracts all of the installation work. Materials are typically supplied by local subcontractors and suppliers with the exception of Andover Controls® and Conservalite® equipment, for which CES is the local representative. CES also provides a five-year warranty of the system and subcontracts with local small businesses for any service required under these warranties.

It should be emphasized that the total energy management system concept is a relatively new one and is a rapidly growing business. Competitors in this innovative field include A.T.&T., Honeywell and Johnson Controls as well as numerous local contractors. As with ECS, the activities of CES serve to increase the awareness and acceptance of this new approach to energy conservation. Thus, its activities enhance competition in the energy conservation system market and generate additional business for the many local contractors employed in the installation and servicing of these systems.

A total energy management package may be financed through a straight purchase contract, installments or a service contract. CES offers financing arrangements for purchasers at finance rates that are competitive with open market rates. In the case of a service contract, CES installs and retains title to the equipment for a fixed term and insures operating savings to the customer. All administrative expenses associated with financing are charged to CES and are not borne by the ratepayers.

Air-Conditioning Systems: Air Conditioning Systems (ACS) is the third department within the WGES division and thus funded by shareholder funds. Its main purpose is to promote, distribute and sell state of the art gas heating and air conditioning systems for the commercial community, with major emphasis on Yazaki® double-effect absorption refrigeration systems.

Such commercial air conditioning equipment has historically been provided by Arkla. Since Arkla is no longer manufacturing and supplying this equipment, ACS was formed in June 1983 to meet the supply need thus created so as to replace obsolete or outworn commercial size gas heating and air conditioning systems.

The administrative, operating or promotional expenses of ACS are not borne by the WGL ratepayers. Nevertheless, the development of off-peak, air conditioning load will actually benefit ratepayers since some of WGL's fixed costs that are presently borne by existing residential and commercial customers will be spread over a larger revenue sales base.

ACS works with local small contractors and dealers to distribute and install this highly efficient equipment. All sales made by ACS are installed by small business contractors in the area. Moreover, ACS provides training to interested contractors wishing to become dealers of these products.

As with ECS and CES, financing is available through ACS. But again, the rates are comparable to those commercially available. Associated administrative expenses are strictly borne by ACS. The risk of non-payment is also the responsibility of ACS and not charged to WGL ratepayers. If a customer chooses to use the monthly gas bill to pay the installments due, mailing, accounting and credit services are also charged to the ACS account.

Conclusion

The Washington Gas Energy Systems division and all three of its departments operate out of a building that is entirely separate and apart from buildings that house WGL's gas utility operations. The leasing costs as well as all telephone service is charged directly to ECS, CES and ACS operating expenses. In short, this divisional operations are separated, both physically and financially, from the gas distribution utility operations of WGL. Advertising, mailings or promotion costs of these divisional operations are directly charged or allocated to that division. None of the capital investment (plant or equipment) or operating costs are included in WGL's rate base or in its rates. Thus the ratepayers of WGL bear none of these costs. It should be emphasized that there has not been nor will there be any interface between the RCS/CACS operations and WGL non-utility division or Davenport. Moreover, it is apparent that WGL's entry in this functionally related, conservation market has served to enhance competition, not restrict it, and to expand, not limit, business opportunities for small businesses.

KENT & O'CONNOR
INCORPORATED
CORPORATE AND GOVERNMENT AFFAIRS
1919 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
202-223-6222

June 4, 1985

The Honorable Don Nickles
Chairman
Subcommittee on Energy Regulation and Conservation
306 DSOB
U.S. Senate
Washington, D.C. 20510

Attn: Al Stamen

Dear Senator Nickles:

Enclosed are the responses of the Alliance for Fair Competition and the American Supply Association to the follow-up questions from the May 6 hearing on S.410, repeal of the CACS program.

Thank you for your continued consideration of our views.

Sincerely,

Patrick C. O'Connor

PCO/lt
Enclosures

Illinois Address — 880 North Lake Shore Drive • Chicago, Illinois 60611 • 312-938-0919

RESPONSES TO FOLLOW-UP QUESTIONS FOR PATRICK O'CONNOR

Question 1: Of the 4.5 million small businesses represented by the Alliance for Fair Competition, how many are engaged in energy conservation as a major part of their business?

Answer: The Alliance for Fair Competition was organized three years ago in response to a growing concern with utility involvement in traditional private sector activities. The goals of the Alliance are to promote legislative and regulatory activities to insure that utility companies are not allowed to use their monopoly position and advantage to compete unfairly with private businesses.

The twenty-one national associations that participate in the Alliance represent a broad spectrum of the business community. The majority of organizations in the Alliance represent businesses engaged in either the manufacture, supply, retail sale, installation or design of energy equipment, appliances or systems. Energy conservation is an integral part of each of these businesses. There are members of the Alliance, e.g. the National Roofing Contractor Association, which represent businesses that are experiencing competition from utilities in areas unrelated to the use or conservation of energy. Other organizations, such as the Small Business Legislative Council, participate in the Alliance because of the basic threat to the country's economic system when regulated monopolies are allowed to compete without restriction with private businesses.

Question 2: I understand that some small businesses support the CACS program. I assume this is because they could benefit from the increased interest in energy conservation which would be generated by the program. How many businesses represented by the Alliance support the CACS program, how many support repeal and how many anticipate qualifying to offer audits under the program?

Question 3: Can you estimate how much additional energy conservation business would be generated for small businesses as a result of CACS implementation?

Answer: Virtually all small businesses support energy conservation. As consumers of energy, small businesses recognize the cost-saving resulting from reduced energy consumption. Many small businesses are actively engaged in providing energy conservation services, equipment and materials to energy users. Energy conservation has become a significant part of many businesses. And as evidenced by the country's reduction in energy conservation, private business has demonstrated its willingness and ability to provide the resources and technical know-how to provide energy conservation.

However, the Congress should not infer support for energy conservation as support for CACS. Since the Energy Security Act of 1980, all businesses involved in providing energy conservation have opposed CACS. Businesses have opposed the CACS program in regulatory proceedings before the Department of Energy and in hearings before Congressional Committees. CACS has been opposed for three basic reasons: 1) the responsibility for commercial energy conservation was given to utility companies; 2) the role that private companies had played and would play in providing energy conservation was ignored; 3) and no statutory provisions for fair competition were provided to insure that utilities implemented CACS fairly with regard to private companies.

In many states, small businesses took it upon themselves to be involved in the development of State Plans to implement CACS, with limited success. Certain states, i.e. Massachusetts, incorporated fair competition provisions in their State Plan. In those states, small businesses are cautiously optimistic that CACS can be implemented without an adverse impact on competition.

Question 4: If both RCS and CACS programs were repealed, would the Alliance still support enhanced protections against anti-competitive practices by utilities?

Answer: As the Alliance and others testified at the May 6 hearing, **repeal of CACS does not address the anticompetitive impact that CACS has on fair competition.** CACS has been the impetus for many state and utility energy conservation programs. Many of these programs will continue in spite of repeal. The Alliance position would be that the mandatory requirement for CACS be repealed and that **states and utilities be given the discretion to continue or start commercial energy conservation programs, but that such programs be subject to strict provisions to ensure fair competition.**

Question 5: How many states have legislation specifically designed to address anti-competitive practices by utilities? Mr. Norton noted California and Massachusetts in his statement.

Answer: In 1984, California passed legislation which addressed anticompetitive utility practices. Recently, Iowa passed legislation dealing with energy conservation, which addresses anticompetitive practices. Legislation is also under consideration in Illinois, Wisconsin, Michigan and New Jersey.

THOMAS D. MORRON, Vice President

EDISON ELECTRIC INSTITUTE The association of electric companies

1111 19th Street, N.W.
Washington, D.C. 20036
Tel. (202) 828-7400

June 4, 1985

The Honorable Don Nickles
Chairman
Senate Subcommittee on Energy Regulation
and Conservation
Washington, D.C. 20510

Dear Senator Nickles:

Enclosed are the responses to the questions submitted to Edison Electric Institute pursuant to the hearing on S. 410.

EEI appreciated the opportunity to appear before the Subcommittee, and testify in support of the CACS repeal measure.

If EEI can be of further assistance, please do not hesitate to call on us.

Sincerely,

Thomas D. Morron

Thomas D. Morron

TDM/jsk
cc: Maxie Davie

Question:	If the CACS program were repealed how would this affect utility involvement in energy conservation? Please indicate how much the response would vary by utility, and what general patterns of involvement you would expect.
Answer:	If the CACS program remains in effect, it would be only one element of the comprehensive energy conservation programs already being implemented by electric utilities. Furthermore, energy conservation is but one element of the comprehensive programs designed and implemented by electric utilities to use energy resources more efficiently. It is common knowledge that the 1970s and early 1980s have been difficult, financially, for our industry. As a result of a changing financial environment, compounded by changes in the economic, political, and technological environments, electric utilities have introduced new planning and operating strategies. Faced with staggering capital requirements for new plants, significant fluctuations in demand and energy growth rates, and regulatory and customer concern about rising prices, electric utilities are implementing strategies to use resources more efficiently.

One such strategy is demand-side management. Through demand-side management, electric utilities initiate activities designed to influence customer use of electricity in ways that will produce desired changes in the utility's load shape. In short, it is a deliberate intervention by the utility in the market place to alter electricity load. Demand-side management programs include load management and strategic conservation. At the industry level, EEI and EPRI have jointly undertaken a major project in demand-side management over the last three years. The two-phase effort is designed to facilitate the exchange of information, experiences, and technological innovations among electric utilities, both investor-owned and publicly-owned.

A significant component of demand-side management is strategic conservation. A variety of programs have been implemented for commercial customers. Because overhead lighting is a major use of energy for many commercial and industrial customers, programs to encourage lighting efficiency have been instituted. One electric utility estimated that its average business customer could reduce electrical lighting costs as much as 20 percent by taking advantage of its program of cash incentives for use of efficient lighting. Businesses participating in the program receive a cash rebate for each energy efficient lamp installed. The effort will pay for itself in energy savings in less than a year.

Several utilities serving summer peaking areas encourage the installation of energy efficient air conditioning equipment in existing commercial buildings. Others promote the use of high pressure sodium lights for outdoor security and street lighting. Such lights are far more energy efficient than mercury vapor lighting. Some utilities encourage installation of energy efficient electric heat pumps, and some offer a CACS-type audit.

Finally, some utilities operate programs to analyze the energy efficiency of existing and planned commercial buildings. Under one such program, the energy use of several building envelope designs can be analyzed to determine the most cost effective one from an energy usage standpoint. The various systems--cooling, heating, water heating, and base load energy usages--are analyzed separately to enable customers to determine where their energy dollars are being spent.

These approaches suggest the variety of energy conservation programs currently offered by electric utilities. These programs, designed for the specific service territory of the electric utility, will be continued irrespective of the fate of the CACS program. Responses to the EEI survey conducted in the fall of 1984 demonstrate the interest of electric utilities in energy efficiency and conservation. The full results of that survey have been submitted to the Subcommittee previously. Basically, of the 109 responding utilities, 47% indicated they currently operate an energy conservation program for their commercial and apartment customers; 80% indicated that existing programs or commercial audits tailored to customer characteristics would be more beneficial to customers than the federally mandated program; only 20% reported that they would offer the CACS program if the federal statute were repealed, because the program would not yield substantial benefits.

Question: Currently, is utility involvement in energy conservation being challenged in court and how, in your view, would repeal of the RCS and CACS program have affected the outcome of court cases which have been rendered.

Answer: EEI is not involved in any litigation involving energy conservation issues. The only potentially relevant court case of which we are aware where utility involvement in energy conservation has been challenged is in Michigan. In that case plaintiffs alleged that the statutory provision imposing a $15 per audit maximum charge on RCS audits results in improper cross-subsidization. The suit was dismissed on the grounds that federal law mandates the $15 limit. The CACS program contains no statutory limit on the charge for a CACS audit. Thus, repeal of CACS would not have affected the Michigan case. A repeal of the RCS program would have, in all probability, affected the circumstances under which the case arose, as well as the outcome.

Question: Small business representatives asserted at the hearing that protections against anti-competitive practices by utilities in the energy conservation field are inadequate. What is your assessment of this problem? Have there been many complaints by small businesses? How many small businesses are currently retained by utilities to assist in energy conservation services, such as audits and installations? Can you estimate how much new work would be made?

Answer: Utility participation in energy conservation activities that incorporate customer needs and utility goals can provide many benefits to ratepayers and society. First, utility participation is likely to foster competitive markets for new products and services by increasing overall demand for such products and services. Many small businesses can share the benefits of these new markets. Second, overall utility efficiency can be improved, resulting in numerous benefits, including lower rates. Third, utility expertise in electricity end-use will help to ensure efficient use of resources. Overall, such utility activities, given regulatory protections which are already in place, can provide strong benefits to utilities, customers and other businesses.

EEI is aware that representatives of small businesses are concerned that utility participation in conservation activities will involve anti-competitive practices. While we believe that these concerns are unfounded, we and our member companies are working closely with the small business community. EEI has addressed the concerns articulated by the Small Business Administration Office of Advocacy and has advised our members of these concerns. Many of our member companies work closely with small business groups on several levels to improve relations and discuss matters of common interest.

Moreover, no utility develops its new programs in a vacuum. Questions concerning competition issues and internal or cross-subsidization of competitive activities are analyzed by most electric utilities from the beginning of their expansion into new activities. If a small business has a specific concern with a utility company's marketing processes or practices, we urge that business to try to reach a resolution directly with that utility.

In addition, many protections exist against unfair competition from electric utilities in the energy conservation field.

First, to the extent that energy conservation activities take place as part of an electric utility's regulated business activities, public utility commissions typically review as part of a utility rate proceeding the description and objectives of the program, methods for its implementation, expected charges and expenses, and potential impacts. Since all commissions conduct public hearings on utility rate filings, small businesses have adequate opportunity to raise their concerns in such proceedings.

Based on the record in such proceedings, including utility and intervenor presentations, commissions will usually make a finding as to whether or not to approve utility expenses for the types of services that are of concern to the small business community. Most, if not all, states provide for judicial review of commission rate decisions.

If a utility initiates conservation activities in a non-regulated affiliate, it is subject to the same trade and anti-trust laws as is any business providing such services. If the utility were required to discuss its unregulated business plans, costs and forecasts in a public hearing, such information would become available to business competitors and thus have chilling anti-competitive effects.

This is not to say that state regulatory commissions would or should ignore unregulated business activities. Where the utility's regulated and unregulated businesses share joint costs or engage in any such transactions, state commissions can and do ensure in the context of a rate case or audit of the regulated utility, that such joint costs are properly allocated and affiliated transactions properly priced.

If there is no other recourse, the small business should approach the appropriate state or local governmental agency; and if necessary use the sufficient legal mechanisms that we are convinced are already in place to prevent unfair competitive practices.

As to the question of how many small businesses are currently retained by utilities to assist in energy conservation services, the total number is not known. However, we expect that utilities contract out energy conservation work in the same proportion as they will contract out work for the CACS program. According to our survey, 70 percent (70%) of the companies will contract out all or part of the CACS program.

Question: What are the results of your recent survey of the start-up costs of the CACS program? How many utilities surveyed will continue RCS activities even though the Department of Energy says that utilities may terminate their programs?

Answer: According to the EEI survey, as we indicated in the statement submitted previously to the Subcommittee, companies anticipate spending a total of nearly $11 million in CACS program development or start-up costs.

Of the 109 responding utilities, 58% will continue offering the RCS program through 1985. Another 35% plan to offer a modified residential conservation program more suitable to the specific characteristics of the service territory, offering a modified RCS program or a substitute residential audit program.

APPENDIX II

Additional Material Submitted for the Record

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

May 6, 1985

The Tennessee Valley Authority (TVA) welcomes the opportunity to provide information about our conservation and energy management programs for the commercial and industrial sector. TVA operates a comprehensive program for residential consumers and for commercial and industrial consumers.

Since 1977--a full year before enactment of the National Energy Conservation Policy Act--TVA and the municipal and cooperative distributors of TVA power have demonstrated their commitment to cost-effective energy conservation programs by voluntarily operating one of the largest and most comprehensive residential conservation programs in the Nation. It has proven to be very successful in offering no-charge, individualized, onsite home energy surveys (audits) to homeowners, landlords, and tenants; no-charge, 100-percent postinstallation inspections; and no-interest financing for a wide variety of weatherization improvements. No-interest and/or low-interest financing is also available for heat pumps, wood heaters, solar water heaters, and heat pump water heaters in many of the TVA power distributor areas.

As a direct result of the TVA/distributor efforts, almost 900,000 living units had received a free onsite energy survey through March 1985. This is a rather significant achievement since it represents more than one third of the homes (including apartment units) in the Tennessee Valley area. More importantly, in approximately 493,000 of these living units various weatherization measures recommended in the surveys had been implemented by the end of March. In addition, more than 32,000 heat pumps, 6,300 wood heaters, 6,000 solar water heaters, and 500 heat pump water heaters have been installed in those living units. Also through TVA and distributor efforts approximately 94,000 load management controls have been installed on air-conditioners and water heaters. Such conservation efforts are presently resulting in an annual kilowatthour saving of 1.7 billion and a kilowatt reduction of over 900,000 in the TVA region. About $440 million has been loaned to residential consumers to install conservation improvements. During this fiscal year (through March 1985), approximately 34 percent of the energy surveys performed and 40 percent of all homes weatherized were for low-income families.

Our conservation and energy management program for residential consumers gave us an important foundation for continuing that effort with our commercial and industrial class of consumers which use more than one-half of all TVA power. In fiscal year 1984, approximately 66 billion kilowatthours were consumed by commercial and industrial consumers including an estimated 323,000 distributor-served customers and 59 large industries served directly by TVA. Recognizing that electric energy is a vital element in the overall productivity mix of commerce and industry, TVA and distributors of TVA power have been providing technical expertise--especially in new technology--to help achieve efficiencies in the use of electric energy.

Seeking an alternative to expensive central station generation, TVA, in 1979, initiated a major energy management program for commercial and industrial consumers. The principal program components are: energy management surveys to identify opportunities for better energy use and low-interest, long-term financing to assist consumer implementation of recommendations for improving use of electric energy.

The surveys, which involve considerable effort, provide significant amounts of information related to the consumer's energy use. They include onsite data collection and an analysis of the consumer's facilities by a trained energy specialist. TVA has devoted considerable time and money to developing the detailed survey procedures, training the energy specialists, and making them readily available throughout the TVA region. A wide range of opportunities for better energy use is considered during the survey, including high-efficiency lighting; heating, cooling, and ventilation systems; high-efficiency motors; thermal envelope improvements; operation and maintenance procedures; scheduling of equipment operation; heat and cool storage systems; and computerized energy management systems. The application of conservation, solar, biomass, and load management technologies is considered in this survey.

The consumer is furnished a detailed report showing the results of the survey and setting out recommendations for better use of electric energy. An analysis of the customer's electrical energy use, which describes where the energy is being used, is included where appropriate. The report is a guide to opportunities for the more efficient use of energy. It will usually include recommendations for changes in operation and maintenance procedures which can result in significant energy saving. These changes can range from the simple, such as turning off lights when a building is unoccupied, to the complex, such as shifting equipment operations to avoid excessive electric demands. The report also includes recommendations for specfic energy saving measures involving capital investment. These measures can range from inexpensive steps, such as using more efficient light bulbs, to more capital intensive items, such as heat recovery or cogeneration applications. In discussing the report with the consumer, information is provided on the availability of TVA financing. A follow-up call is made to the consumer approximately a month after the report is furnished to offer any assistance that may be needed in helping to develop a plan for implementing any of the recommendations.

Surveys are provided free for small- to medium-size facilities and at TVA's cost for larger, more complex facilities. The survey charge is refunded if the customer implements enough of the recommendations to achieve a significant amount of the energy efficiency identified by the survey.

The program is proving effective. Through March 1985, we have surveyed more than 20,000 buildings, which include over 429 million square feet of space, and have identified more than 64,000 energy saving opportunities. This represents a potential reduction in electric energy use of over 1.2 billion kilowatthours and a potential customer savings of $63 million annually. It appears that customers are implementing well over one half of all the recommendations. (Operation and maintenance recommendations, which generally involve less cost, have had the highest implementation rate. Water heating and lighting measure recommendations have the next highest implementation rate. The level of implementation is about the same, regardless of the size of the customer operations.) A potential reduction of over 575,000 kilowatts in electric demand during winter months has already been identified.

Through March we have made loans totaling over $2.9 million to assist with implementation.

We are reaching all types of consumers--schools, health care facilities, and government buildings, as well as the typical commercial and industrial facilities. The following examples of actions taken on the basis of survey recommendations demonstrate the benefits that can be achieved, often through implementation of relatively inexpensive items.

At a Mississippi high school the following recommendations were implemented after the survey.

- Double-glazed windows.
- Replacement of some windows with insulated panels.
- Energy management control systems.
- Energy-efficient lighting.
- Improved operation and maintenance.

Postinstallation billings at the school indicate annual energy savings of about 1.9 million kilowatthours, about 38 percent of preinstallation use. The cost of implementing the recommendations was only about $170,000; however, the annual saving is over $80,000, yielding a simple payback in just over two years. This is a rather dramatic example of the existing inefficiencies in electric use in some buildings and shows what savings can be readily achieved.

An industrial customer, with typical facilities, implemented the following recommendations.

- Furnace scheduling and operation.
- Waste heat recovery.
- Efficient lighting and daylighting.

This is presently resulting in an annual saving of over $40,000 for an installed cost of only about $90,000, yielding a 2.25-year simple payback.

Particular emphasis is being placed on cost-effective active solar, biomass, and load management systems. These technologies, which are eligible for low-interest financing, are considered in connection with the energy management surveys. In addition, special activities are conducted to provide information about these new technologies and thereby encourage greater acceptance and use.

Our efforts to encourage commercialization of such technologies have concentrated on flatplate and shallow solar pond applications primarily for water heating; woodwaste applications for space heating, water heating, and cogeneration; and ice storage, heat storage, and energy management systems controlling large loads, such as chillers. We provide feasibility studies, design reviews, and technical assistance for these technologies and have established a trust fund administered by the University of Alabama in Huntsville, Alabama, to provide direct loans, or to assist in offsetting interest costs on loans from private lending institutions, for some of the biomass and solar installations.

Over 700 requests for assistance with these technologies have been processed. A large number of installations are being extensively monitored to obtain data for use in encouraging other similar installations. Our efforts to date have been useful in familiarizing design professionals with these technologies and in encouraging their broader use. To enhance these efforts, we are developing solar and biomass design manuals, preparing generic system designs, and conducting various training and outreach activities for design professionals.

TVA also has a New Construction Program, which was established to encourage the inclusion of energy efficiency features when new facilities are being constructed or when there are major renovations of existing commercial buildings. Under the program, TVA representatives work with the consumer's architect and engineer to provide conceptual design assistance and review of construction plans. A major objective of this program is to make the design professionals aware of these technologies that can be incorporated in their plans and effectively implemented in the construction of the facilities.

In addition to working directly with others, TVA is developing and making available several design and energy analysis tools. For example, energy design guideline manuals, which will be useful for those designing and constructing schools, offices, hospitals, hotels/motels, and several other types of commercial building, are being developed. Another such effort includes making available energy nomographs that help designers perform energy and cost analyses of commercial buildings.

We appreciate this opportunity to briefly describe some of TVA's conservation and energy management efforts. TVA's programs are helping provide a cost-effective alternative for meeting future electrical energy needs. At the same time, individual commercial and industrial operations are enjoying the cost saving benefits resulting from the more efficient use of electric energy.

Statement of S. H. Booker
Vice President of Marketing - Alabama Power Company
supporting
S.410 - Repeal of the Commercial and Apartment Conservation Service
before the
Subcommittee on Energy Regulation and Conservation
Committee on Energy and Natural Resources
United States Senate

May 6, 1985

Alabama Power Company supplies retail electric service to most of the State of Alabama and in our experience we have found that Title VII of the National Energy Conservation Policy Act relating to energy conservation for commercial buildings and multifamily dwellings is totally unnecessary for several cogent reasons.

First, throughout its history, Alabama Power Company has actively encouraged the wise and conservative use of electricity. We continue to do so today by promoting "Good Cents Homes" which use about half the energy for heating and cooling as conventional houses, and high efficiency heat pumps, air conditioners, water heaters and other appliances that use relatively less energy than their counterpart of earlier years.

Second, Title VII of the National Energy Conservation Policy Act affects only commercial customers using 4,000 kilowatt hours or less per month. Consumption by these customers represents a small fraction of the total electricity used in commerce.

Third, Alabama Power Company offers energy management audits to commercial and other classification of customers at their request. (Apartments are included in the Company's residential conservation audit program.) It has been our experience that little actual conservation results from energy audits provided by the Company pursuant to a company solicitation rather than a customer request.

We urge the repeal of Title VII of the National Energy Conservation Policy Act relating to energy conservation for commercial buildings and multifamily dwellings as provided for by S. 410. The Energy Division of the Alabama Department of Economic and Community Affairs concurs in this position.

We appreciate the opportunity to make this statement.

- 0 -

Statement of
Donald H. Denton
Senior Vice President, Marketing and Rates
Duke Power Company
Charlotte, North Carolina

Duke Power Company wants the Commercial and Apartment Conservation Service (CACS) program repealed for the following reasons:

Duke Power Company has actively participated in the Residential Conservation Service (RCS) program since 1981. We entered this government mandated program with the resolve to have it produce as many benefits as possible for our ratepayers and for Duke Power. Since beginning RCS, we have spent more than $1.7 million to provide RCS audits to only .45%, less than one-half of one percent, of our residential customers. These costs have been borne by our ratepayers. The ratepayers have realized few, if any, benefits from RCS.

We also discovered that very few customers were willing to devote the time required of them to complete the detailed audit mandated by the RCS program. The Energy Conservation and Load Management programs that Duke offered prior to RCS have been and will continue to be less costly to implement and more effective in reducing energy usage.

The CACS program requires detailed audits, customer involvement, and customer charge similar to RCS. Therefore, Duke anticipates a very small customer response and no additional energy conservation benefits to result from our estimated $350,000 to $500,000 expenditure.

Duke Power's Commercial and Residential Departments have successfully implemented Load Management and other Energy Conservation programs. These programs have always been available to all of our customers and are directed at the areas of energy conservation that will produce savings for the customers in at least two ways. First, they will reduce the customers' energy consumption and thus their energy bills. Also, these programs are specifically designed to enhance Duke Power's ability to continue to be the most efficient electric power generating company in America by improving our system load factor and delaying the need for future power generating plants. This allows Duke to have rates that are among the lowest in the country and relieves our customers from unnecessary financial burden. These programs are offered at no charge.

Due to our responsibility to our ratepayers and stockholders, Duke is constantly striving to improve our present programs as well as to develop new areas of Load Management and Energy Conservation that will meet the needs of the ratepayer as efficiently as possible. Duke Power wants CACS repealed because our ratepayers would be charged additional costs for a program that cannot produce the benefits already being experienced through our Load Management programs.

Also, consideration should be given to repealing the RCS program since the offering ended January 1, 1985, but the ratepayers must still pay the costs involved with maintaining the capability of performing RCS audits. Our ratepayers do not need these additional rate burdens.

○